

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: C. Delacruz Examiner #: 7100 Date: 7-20-05
 Art Unit: 1614 Phone Number: 2-0572 Serial Number: 091616, 718
 Mail Box and Bldg/Room Location: 3C70 43A78 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____ *Please see attached*

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the methods of claims 1, 3, 13.

Key terms are highlighted

*activity to treat
 antidipsotropic alcohol
 abuse
 alcohol
 dependence*

*Thanks
 Cybil*

STAFF USE ONLY

Searcher: _____	Type of Search	Vendors and cost where applicable
Searcher Phone #: _____	NA Sequence (#) <u>STN</u>	Dialog _____
Searcher Location: _____	AA Sequence (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Structure (#) _____	Dr. Link _____
Date Completed: <u>7/25/05</u>	Bibliographic _____	Lexis/Nexis _____
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	Other _____	

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FILE 'HCAPLUS' ENTERED AT 15:16:05 ON 25 JUL 2005

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FILE COVERS 1907 - 25 Jul 2005 VOL 143 ISS 5

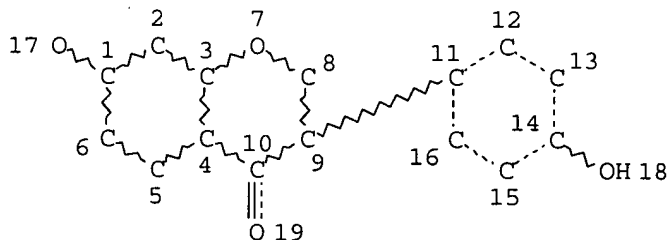
FILE LAST UPDATED: 24 Jul 2005 (20050724/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L3 1168 SEA FILE=REGISTRY SSS FUL L1

L4 48 SEA FILE=REGISTRY ABB=ON PLU=ON ALDH2 OR ALDH(L)2

L6 27 SEA FILE=REGISTRY ABB=ON PLU=ON ALCOHOL DEHYDROGENASE 2?/CN

L15 6832 SEA FILE=HCAPLUS ABB=ON PLU=ON L3

L16 684 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR L4 OR ALDH2 OR ALDH (W)2 OR ALCOHOL (W) DEHYDROGENASE (W) 2

L17 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L16

=> d ibib abs hitstr l17 tot

L17 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:20483 HCAPLUS
 DOCUMENT NUMBER: 140:71053
 TITLE: Compounds useful for the inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alcohol consumption, dependence and abuse
 INVENTOR(S): Keung, Wing Ming; Vallee, Bert L.; Gao, Guangyao
 PATENT ASSIGNEE(S): The Endowment for Research in Human Biology, Inc., USA
 SOURCE: PCT Int. Appl., 67 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004002470	A1	20040108	WO 2003-US20584	20030627
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2491089	AA	20040108	CA 2003-2491089	20030627
US 2004068003	A1	20040408	US 2003-609120	20030627
EP 1542675	A1	20050622	EP 2003-762244	20030627
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
PRIORITY APPLN. INFO.:			US 2002-391907P	P 20020627
			WO 2003-US20584	W 20030627

OTHER SOURCE(S): MARPAT 140:71053

AB The present invention provides novel antidipsotropic compds. The invention further provides methods of inhibiting **ALDH-2** using the compds. described herein. Methods for modulating alc. consumption, alc. dependence and/or alc. abuse by administering the compds. of the invention to an individual are also provided. The present invention further provides a rationale for designing addnl. novel antidipsotropic compds. Hexzein, given orally, reduced ethanol intake in hamsters.

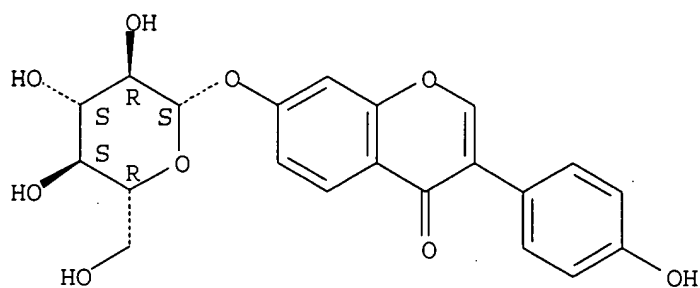
IT 552-66-9, Daidzin

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PKT (Pharmacokinetics); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
 (antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



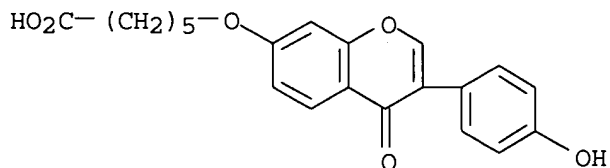
IT **146698-97-7, Hexzein**

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 146698-97-7 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-(9CI) (CA INDEX NAME)



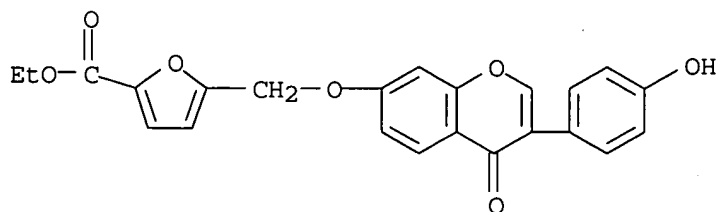
IT **640275-97-4P**

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 640275-97-4 HCAPLUS

CN 2-Furancarboxylic acid, 5-[[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]methyl]-, ethyl ester (9CI) (CA INDEX NAME)



IT **486-63-5P 371226-88-9P 371226-91-4P**
371226-94-7P 371226-95-8P 371227-03-1P
371227-05-3P 640275-71-4P 640275-73-6P

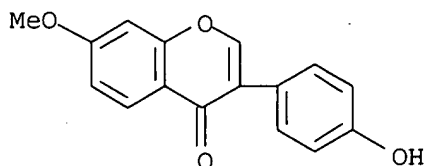
640275-78-1P 640275-79-2P 640275-89-4P
640275-91-8P 640275-93-0P 640275-95-2P
640275-96-3P 640275-99-6P

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
study); PREP (Preparation); USES (Uses)

(antidipsotropic compds. useful for inhibition of mitochondrial
aldehyde dehydrogenase (ALDH-2) and modulating alc.
consumption, dependence and abuse)

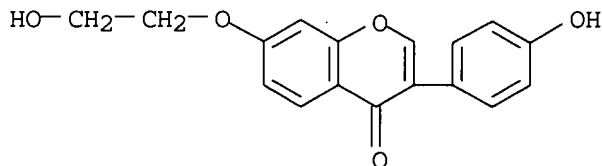
RN 486-63-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA INDEX
NAME)



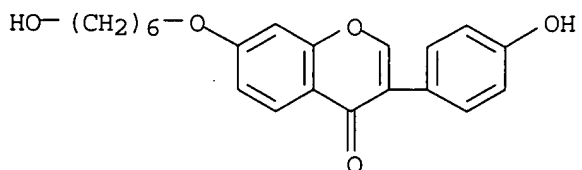
RN 371226-88-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(2-hydroxyethoxy)-3-(4-hydroxyphenyl)- (9CI) (CA
INDEX NAME)



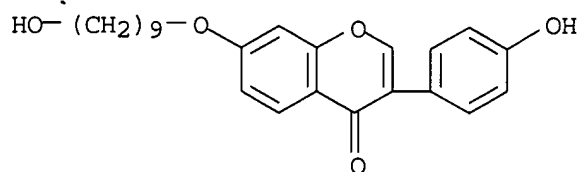
RN 371226-91-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-hydroxyhexyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
(CA INDEX NAME)



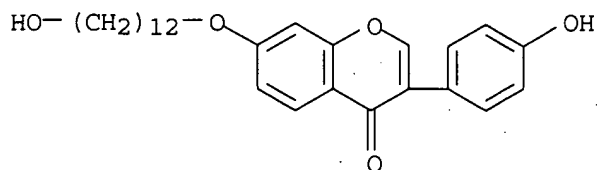
RN 371226-94-7 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(9-hydroxynonyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
(CA INDEX NAME)



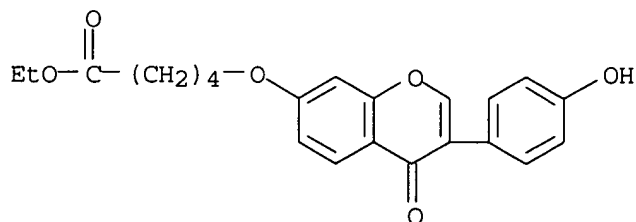
RN 371226-95-8 HCAPLUS

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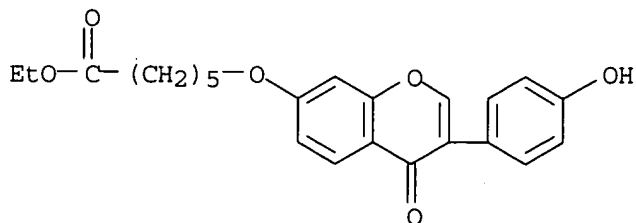
RN 371227-03-1 HCAPLUS

CN Pentanoic acid, 5-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-,
ethyl ester (9CI) (CA INDEX NAME)



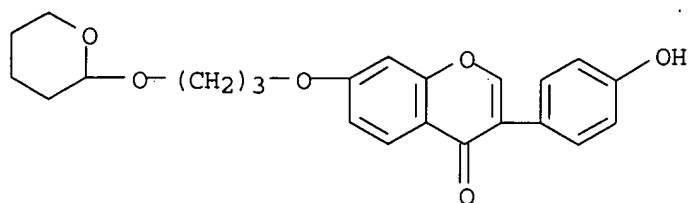
RN 371227-05-3 HCAPLUS

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ethyl ester (9CI) (CA INDEX NAME)



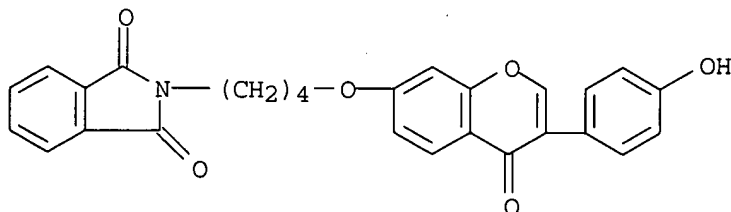
RN 640275-71-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]- (9CI) (CA INDEX NAME)



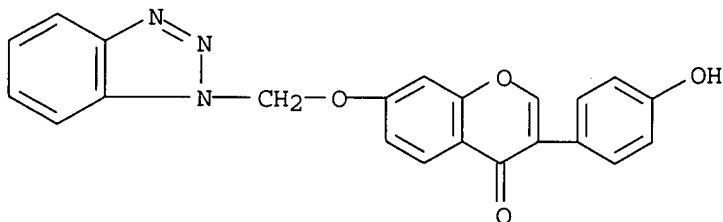
RN 640275-73-6 HCAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 2-[4-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]butyl]- (9CI) (CA INDEX NAME)



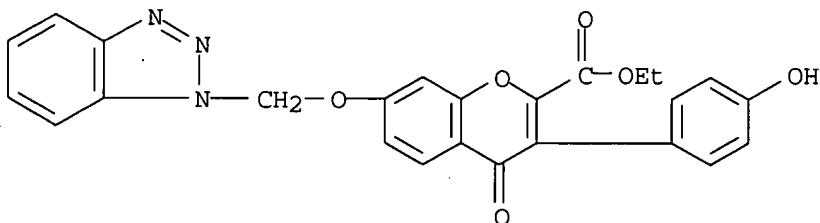
RN 640275-78-1 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(1H-benzotriazol-1-ylmethoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



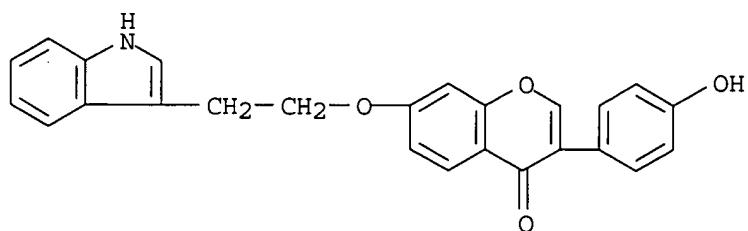
RN 640275-79-2 HCAPLUS

CN 4H-1-Benzopyran-2-carboxylic acid, 7-(1H-benzotriazol-1-ylmethoxy)-3-(4-hydroxyphenyl)-4-oxo-, ethyl ester (9CI) (CA INDEX NAME)

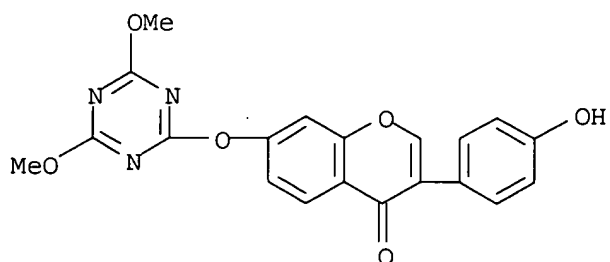


RN 640275-89-4 HCAPLUS

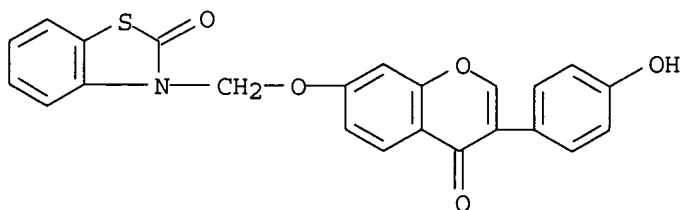
CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-[2-(1H-indol-3-yl)ethoxy]- (9CI) (CA INDEX NAME)



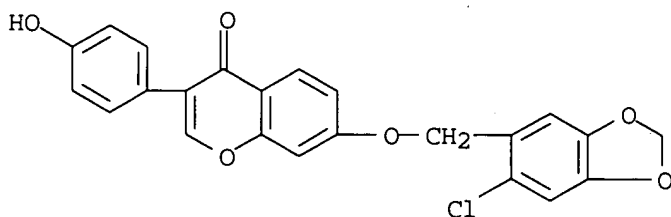
RN 640275-91-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(4,6-dimethoxy-1,3,5-triazin-2-yl)oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



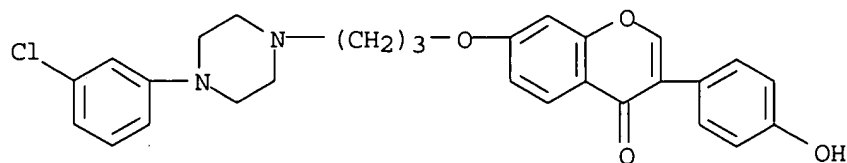
RN 640275-93-0 HCAPLUS
 CN 2(3H)-Benzothiazolone, 3-[[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



RN 640275-95-2 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(6-chloro-1,3-benzodioxol-5-yl)methoxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

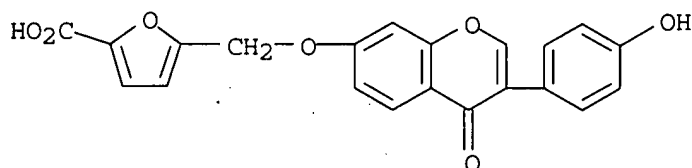


RN 640275-96-3 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[3-[4-(3-chlorophenyl)-1-piperazinyl]propoxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 640275-99-6 HCAPLUS

CN 2-Furancarboxylic acid, 5-[[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]methyl]- (9CI) (CA INDEX NAME)



IT 446-72-0 486-66-8, Daidzein 552-59-0

97846-18-9 146698-98-8, Hepzein 146698-99-9,

Undeczein 188881-56-3, Deczein 371226-97-0

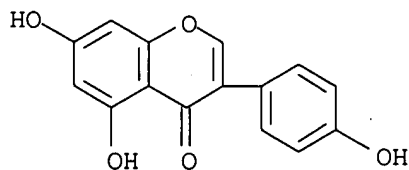
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);

THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

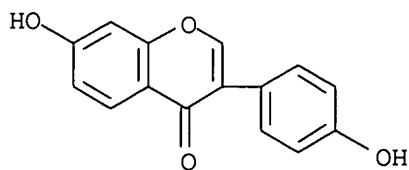
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

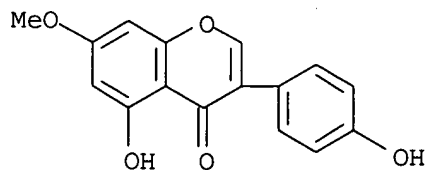
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RN 552-59-0 HCAPLUS

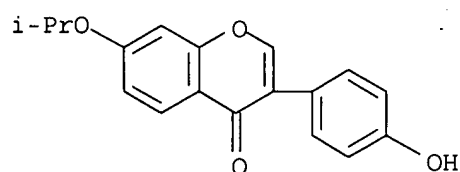
CN 4H-1-Benzopyran-4-one, 5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA

INDEX NAME)



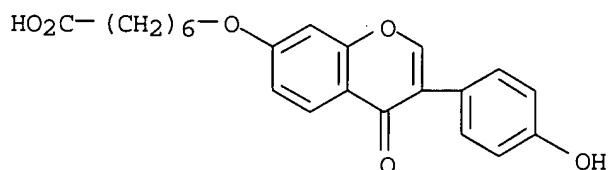
RN 97846-18-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-(1-methylethoxy)- (9CI) (CA INDEX NAME)



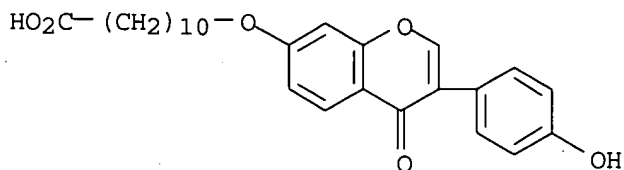
RN 146698-98-8 HCAPLUS

CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



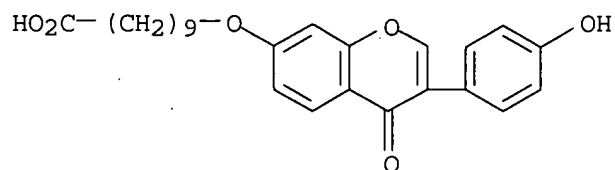
RN 146698-99-9 HCAPLUS

CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



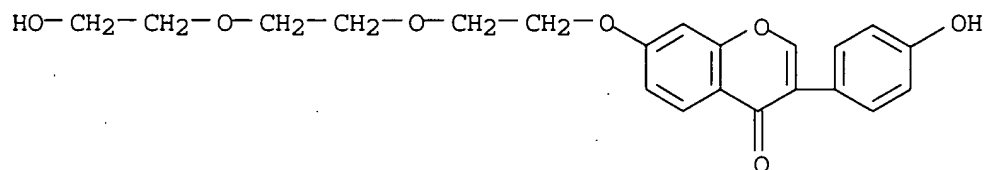
RN 188881-56-3 HCAPLUS

CN Decanoic acid, 10-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



RN 371226-97-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[2-[2-(2-hydroxyethoxy)ethoxy]ethoxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



IT 640275-77-0P 640275-88-3P

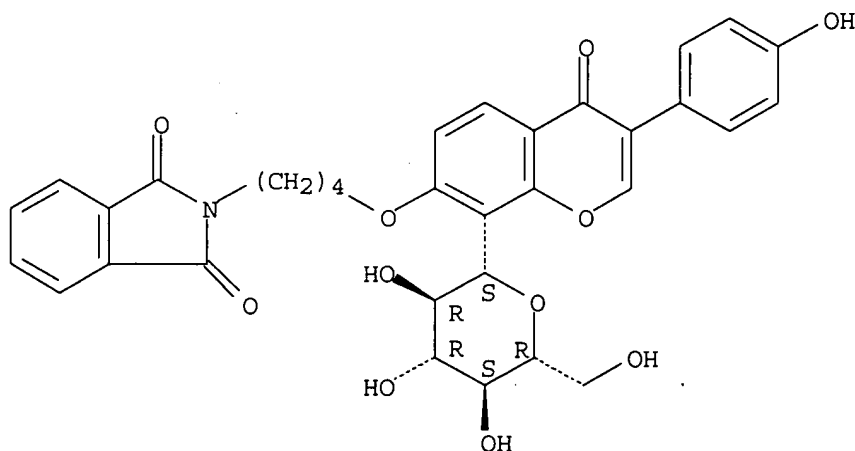
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 640275-77-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)butoxy]-8-beta-D-glucopyranosyl-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

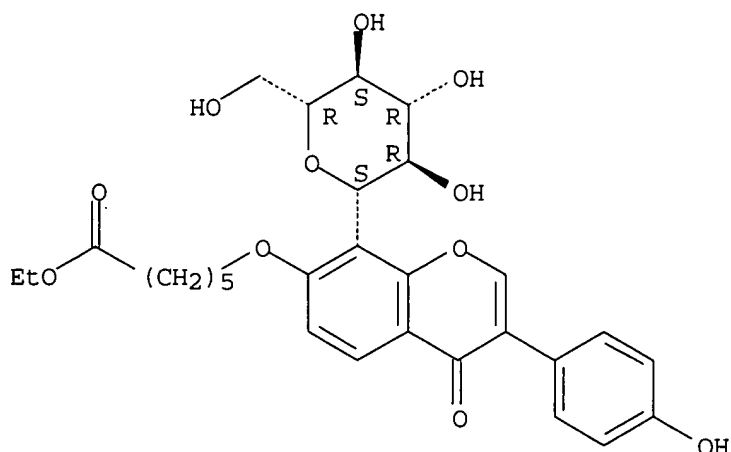
Absolute stereochemistry.



RN 640275-88-3 HCAPLUS

CN Hexanoic acid, 6-[[8-beta-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 3681-99-0, Puerarin

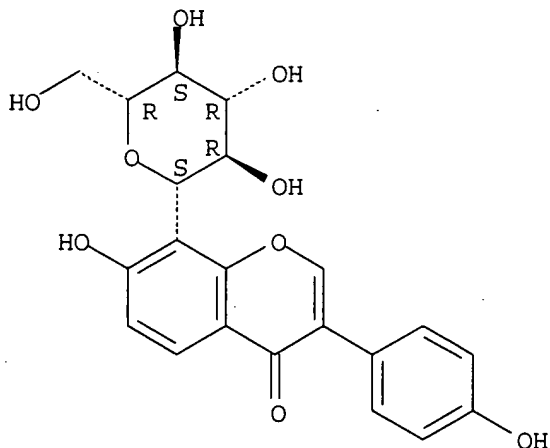
RL: RCT (Reactant); RACT (Reactant or reagent)

(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



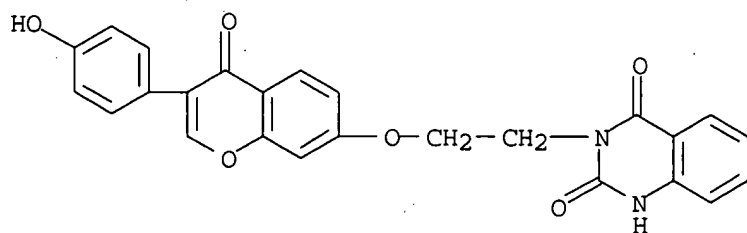
IT 640275-90-7P 640275-98-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

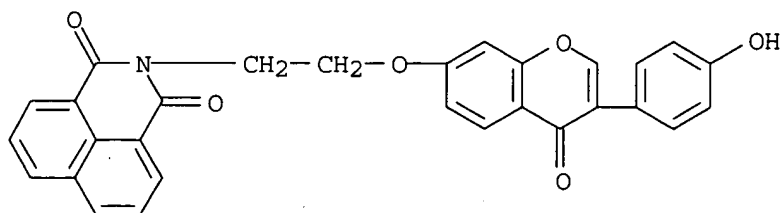
(antidipsotropic compds. useful for inhibition of mitochondrial aldehyde dehydrogenase (**ALDH-2**) and modulating alc. consumption, dependence and abuse)

RN 640275-90-7 HCAPLUS

CN 2,4(1H,3H)-Quinazolinedione, 3-[2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]ethyl] - (9CI) (CA INDEX NAME)



RN 640275-98-5 HCAPLUS
 CN 1H-Benz[de]isoquinoline-1,3(2H)-dione, 2-[2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]ethyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:932226 HCAPLUS

DOCUMENT NUMBER: 140:298665

TITLE: Anti-dipsotropic isoflavones: the potential therapeutic agents for alcohol dependence

AUTHOR(S): Keung, Wing Ming

CORPORATE SOURCE: Department of Psychiatry, Massachusetts Mental Health Center, and Center for Biochemical and Biophysical Sciences and Medicine, Harvard Medical School, Cambridge, MA, 02139, USA

SOURCE: Medicinal Research Reviews (2003), 23(6), 669-696

CODEN: MRREDD; ISSN: 0198-6325

PUBLISHER: John Wiley & Sons, Inc.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review on the anti-dipsotropic isoflavones: the potential therapeutic agents for alc. dependence. Daidzin is the active principle of Radix puerariae (RP), an herbal remedy that has been used apparently safely and effectively for the treatment of "alc. addiction" in China for more than a millennium. It has been shown to reduce alc. consumption in all animal models tested to date. A link between daidzin's capacity to reduce alc. consumption and its ability to increase liver mitochondrial monoamine oxidase (MAO): aldehyde dehydrogenase (**ALDH-2**) activity ratio has been established. Daidzin analogs that potently inhibit **ALDH-2** but not MAO are the most antidipsotropic, whereas those that also inhibit MAO are not. On the basis of these findings, it was proposed that the liver mitochondrial MAO-**ALDH-2** pathway is the primary site of action of daidzin and that a biogenic aldehyde derived from the action of MAO mediates its anti-dipsotropic action. Therefore, to design and synthesize more potent

anti-dipsotropic analogs, structural features that would enhance **ALDH-2** inhibition and/or decrease MAO inhibition needed to be evaluated. Structure-activity-relationship (SAR) studies have revealed that a sufficient set of criteria for a potent anti-dipsotropic analog is an isoflavone with a free 4'-OH function and a straight-chain alkyl at the 7 position that has a terminal polar function such as -OH, -COOH, or -NH₂. The preferable chain lengths for the 7-O-o-carboxy, 7-O-o-hydroxy, and 7-O-o-amino substituents are $5 \leq n \leq 10$, $2 \leq n \leq 6$, and $n \geq 4$, resp. Analogs that meet these criteria have increased potency for **ALDH-2** inhibition and/or decreased potency for MAO inhibition and are, therefore, likely to be potent anti-dipsotropic agents.

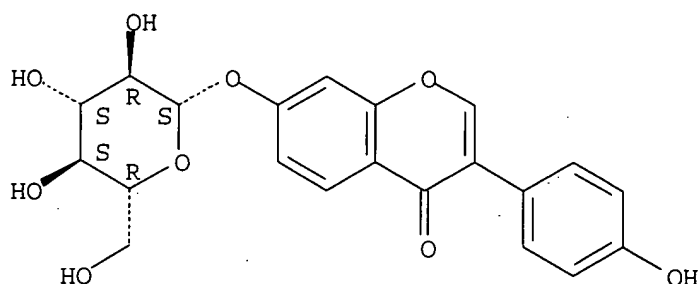
IT 552-66-9, Daidzin

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(anti-dipsotropic isoflavones and potential therapeutic agents for alc. dependence)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:645702 HCAPLUS

DOCUMENT NUMBER: 140:138710

TITLE: Synthesis of daidzin analogues as potential agents for alcohol abuse

AUTHOR(S): Gao, Guang-Yao; Li, Dian-Jun; Keung, Wing Ming

CORPORATE SOURCE: Center for Biochemical and Biophysical Science and Medicine and Department of Psychiatry at Massachusetts Mental Health Center, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Bioorganic & Medicinal Chemistry (2003), 11(18), 4069-4081

CODEN: BMECEP; ISSN: 0968-0896

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:138710

AB Daidzin, the active principle of an herbal remedy for 'alc. addiction', has been shown to reduce alc. consumption in all laboratory animals tested to date. Correlation studies using structural analogs of daidzin suggests that it acts by raising the monoamine oxidase (MAO)/mitochondrial aldehyde dehydrogenase (**ALDH-2**) activity ratio (J. Med. Chemical

2000, 43, 4169). Structure-activity relationship (SAR) studies on the 7-O-substituted analogs of daidzin have revealed structural features important for **ALDH-2** and MAO inhibition (J. Med. Chemical 2001, 44, 3320). We here evaluated effects of substitutions at 2, 5, 6, 8, 3' and 4' positions of daidzin on its potencies for **ALDH-2** and MAO inhibition. Results show that analogs with 4'-substituents that are small, polar and with hydrogen bonding capacities are most potent **ALDH-2** inhibitors, whereas those that are non-polar and with electron withdrawing capacities are potent MAO inhibitors. Analogs with a 5-OH group are less potent **ALDH-2** inhibitors but are more potent MAO inhibitors. All the 2-, 6-, 8- and 3'-substituted analogs tested so far do not inhibit **ALDH-2** and/or have decreased potencies for MAO inhibition. This, together with the results obtained from previous studies, suggests that a potent antidipsotropic analog would be a 4',7-disubstituted isoflavone. The 4'-substituent should be small, polar, and with hydrogen bonding capacities such as, -OH and -NH₂; whereas the 7-substituent should be a straight-chain alkyl with a terminal polar function such as -(CH₂)_n-OH with 2 ≤ n ≤ 6, -(CH₂)_n-COOH with 5 ≤ n ≤ 10, or -(CH₂)_n-NH₂ with n ≥ 4.

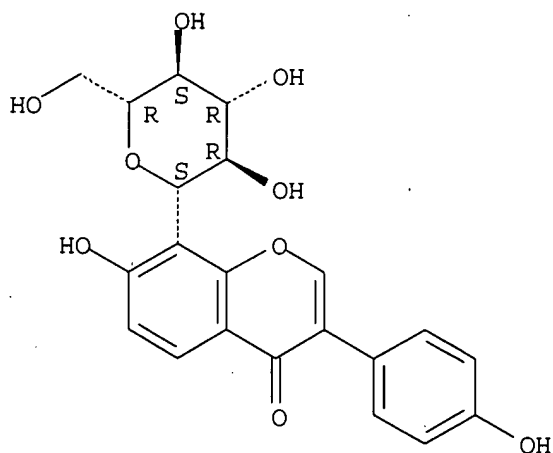
IT 3681-99-0, Puerarin

RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(synthesis and structure-activity relationship of daidzin analogs as potential agents for alc. abuse)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 486-63-5P 97846-18-9P 371226-97-0P
371227-05-3P 640275-71-4P 640275-73-6P
640275-78-1P 640275-88-3P

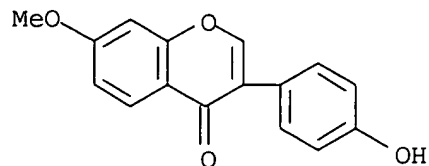
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(synthesis and structure-activity relationship of daidzin analogs as potential agents for alc. abuse)

RN 486-63-5 HCAPLUS

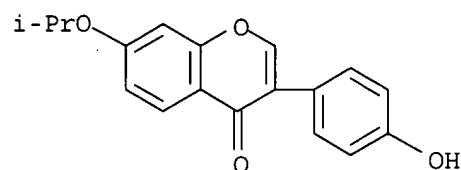
CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA INDEX

NAME)



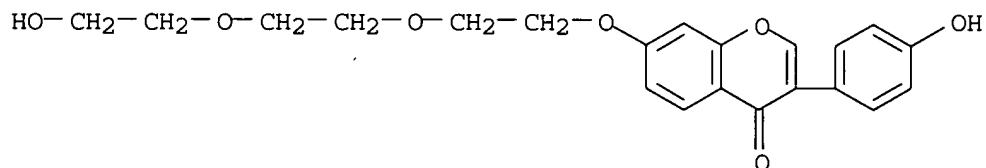
RN 97846-18-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-(1-methylethoxy)- (9CI) (CA INDEX NAME)



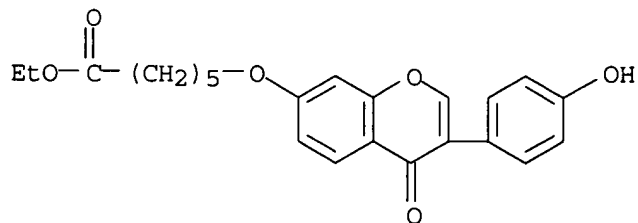
RN 371226-97-0 HCAPLUS

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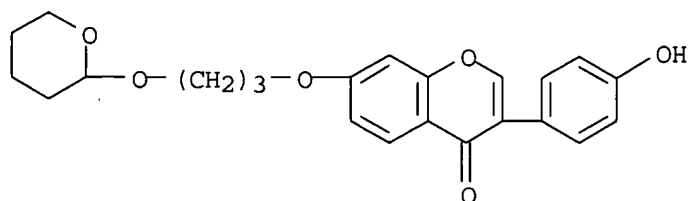
RN 371227-05-3 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

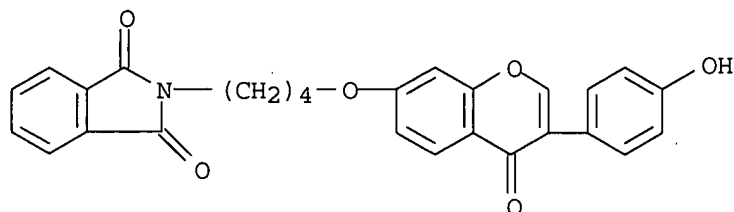


RN 640275-71-4 HCAPLUS

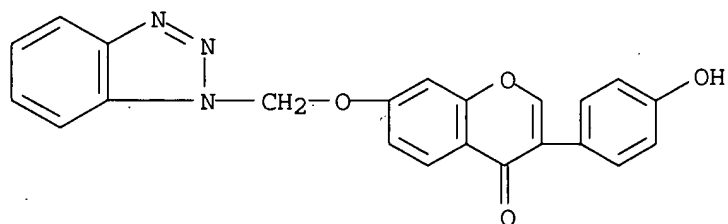
CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-[3-[(tetrahydro-2H-pyran-2-yl)oxy]propoxy]- (9CI) (CA INDEX NAME)



RN 640275-73-6 HCAPLUS
 CN 1H-Isoindole-1,3(2H)-dione, 2-[4-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]butyl]- (9CI) (CA INDEX NAME)

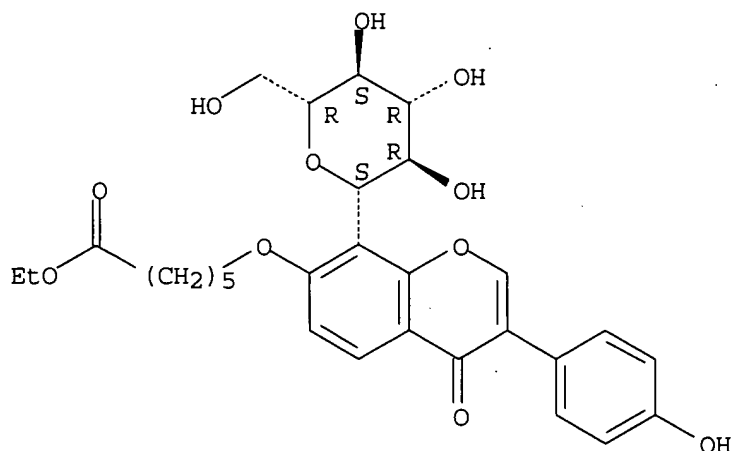


RN 640275-78-1 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(1H-benzotriazol-1-ylmethoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 640275-88-3 HCAPLUS
 CN Hexanoic acid, 6-[[8-β-D-glucopyranosyl-3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

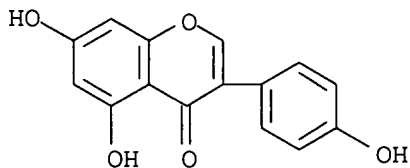


IT 446-72-0 486-66-8 529-59-9 552-59-0
552-66-9 640275-77-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(synthesis and structure-activity relationship of daidzin analogs as
potential agents for alc. abuse)

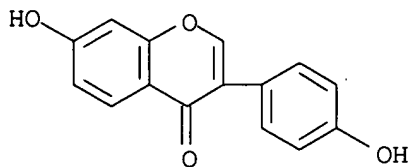
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
NAME)



RN 486-66-8 HCAPLUS

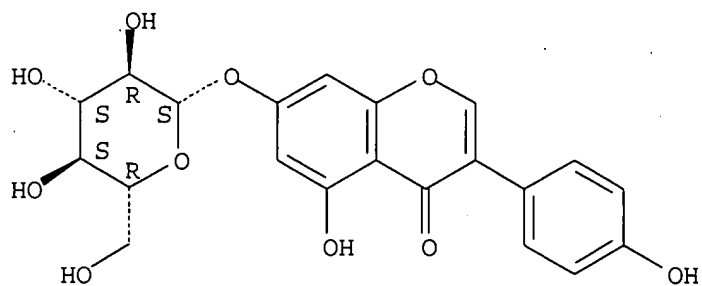
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
NAME)



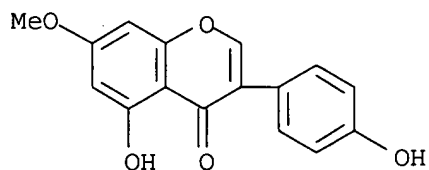
RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(beta-D-glucopyranosyloxy)-5-hydroxy-3-(4-
hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

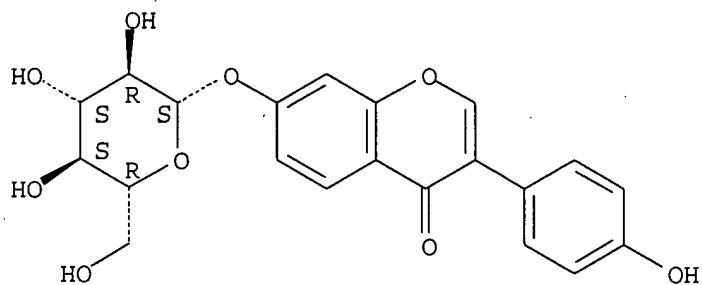


RN 552-59-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA INDEX NAME)



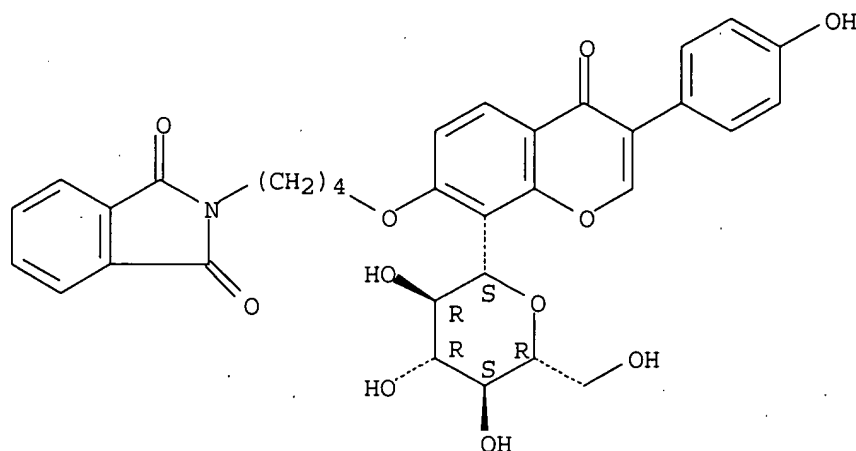
RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 640275-77-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[4-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)butoxy]-8- β -D-glucopyranosyl-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:627700 HCAPLUS

DOCUMENT NUMBER: 135:344295

TITLE: Synthesis of Potential Antidipsotropic Isoflavones: Inhibitors of the Mitochondrial Monoamine Oxidase-Aldehyde Dehydrogenase Pathway

AUTHOR(S): Gao, Guang-Yao; Li, Dian-Jun; Keung, Wing Ming
CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and Medicine, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Journal of Medicinal Chemistry (2001), 44(20), 3320-3328

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:344295

AB Recently we have shown that daidzin, the major active principle of an ancient herbal treatment for "alc. addiction", suppresses ethanol intake in alc.-preferring laboratory animals. Further, we have identified the monoamine

oxidase (MAO)-aldehyde dehydrogenase (**ALDH-2**) pathway of the mitochondria as the potential site of action of daidzin. Daidzin analogs that potently inhibit **ALDH-2** but have no or little effect on MAO are most antidipsotropic, whereas those that also inhibit MAO exhibit little, if any, antidipsotropic activity. Therefore, in the design and synthesis of more potent antidipsotropic analogs, structural features important for the inhibition of both **ALDH-2** and MAO must be taken into consideration. To gain further information on the structure-activity relationships at the inhibitor binding sites of **ALDH-2** and MAO, we prepared 44 analogs of daidzin and determined their potencies for **ALDH-2** and MAO inhibition. Results indicate that a sufficient set of criteria for a potent antidipsotropic analog is an isoflavone with a free 4'-OH function and a straight-chain alkyl substituent at the 7 position that has a terminal polar function such as -OH, -COOH, or -NH₂. The preferable chain lengths for the 7-O- ω -hydroxy, 7-O- ω -carboxy, and

7-O- ω -amino substituents are $2 \leq n \leq 6$, $5 \leq n \leq 10$, and $n \geq 4$, resp. Analogs that meet these criteria have increased potency for **ALDH-2** inhibition and/or decreased potency for MAO inhibition and therefore are likely to be potent antidipsotropic agents.

IT 552-66-9, Daidzin 99007-87-1 146698-96-6
146698-97-7 146698-98-8 146698-99-9
188881-56-3 188881-57-4 188881-59-6
250252-72-3 250252-73-4 309252-38-8
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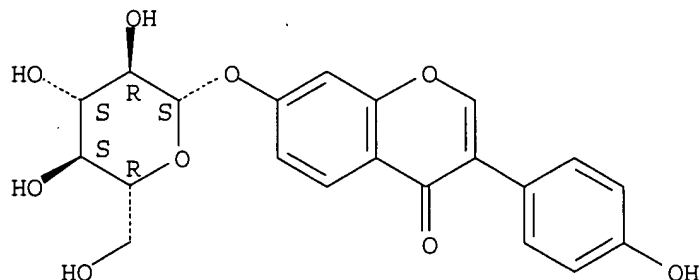
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(synthesis of potential antidipsotropic isoflavones as inhibitors of the mitochondrial monoamine oxidase-aldehyde dehydrogenase pathway)

RN 552-66-9 HCAPLUS

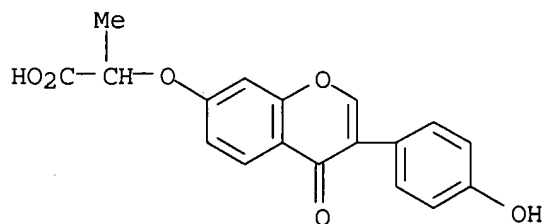
CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



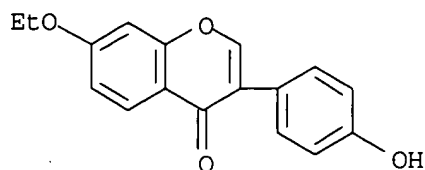
RN 99007-87-1 HCAPLUS

CN Propanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



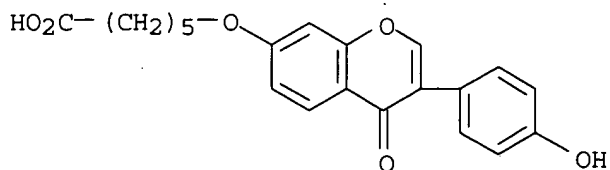
RN 146698-96-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



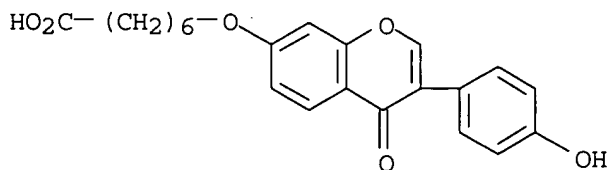
RN 146698-97-7 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



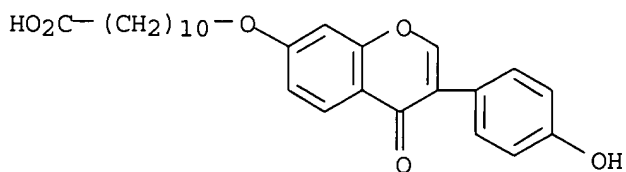
RN 146698-98-8 HCAPLUS

CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



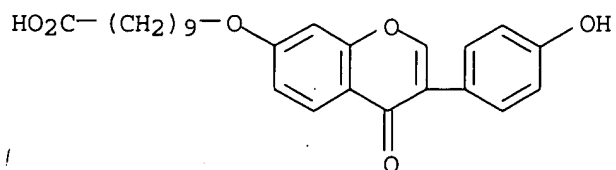
RN 146698-99-9 HCAPLUS

CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)

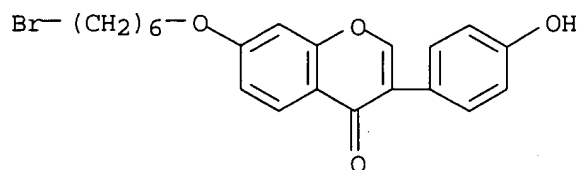


RN 188881-56-3 HCAPLUS

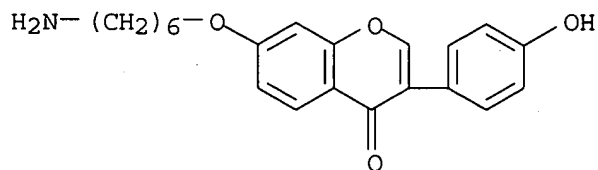
CN Decanoic acid, 10-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



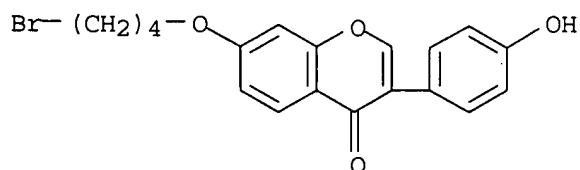
RN 188881-57-4 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(6-bromohexyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
 (CA INDEX NAME)



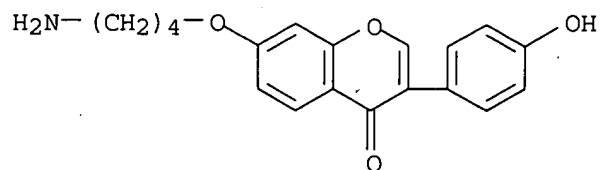
RN 188881-59-6 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(6-aminohexyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
 (CA INDEX NAME)



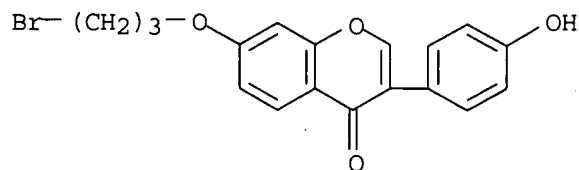
RN 250252-72-3 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(4-bromobutoxy)-3-(4-hydroxyphenyl)- (9CI) (CA
 INDEX NAME)



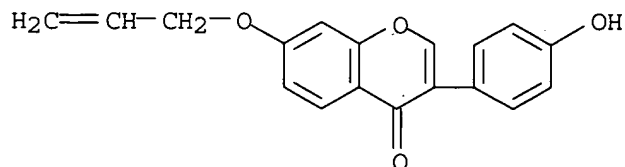
RN 250252-73-4 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(4-aminobutoxy)-3-(4-hydroxyphenyl)- (9CI) (CA
 INDEX NAME)



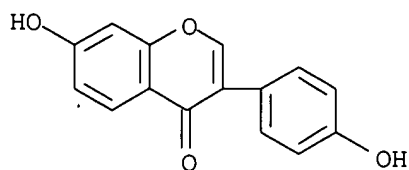
RN 309252-38-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(3-bromopropoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 309252-39-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-(2-propenyloxy)- (9CI) (CA INDEX NAME)



IT 486-66-8, Daidzein
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
 (synthesis of potential antidipsotropic isoflavones as inhibitors of the mitochondrial monoamine oxidase-aldehyde dehydrogenase pathway)
 RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



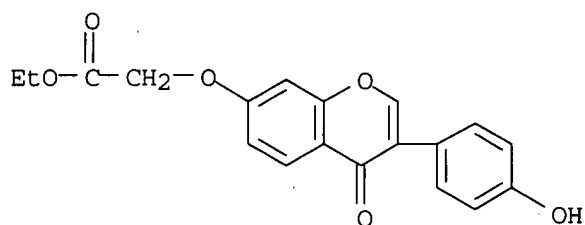
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371227-03-1P 371227-05-3P 371227-08-6P
371227-11-1P 371227-13-3P 371227-16-6P
371227-18-8P

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (synthesis of potential antidipsotropic isoflavones as inhibitors of the mitochondrial monoamine oxidase-aldehyde dehydrogenase pathway)

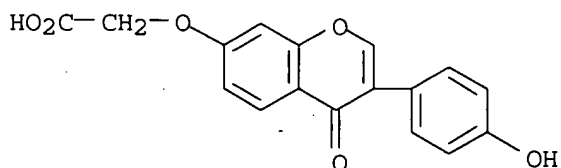
RN 38588-55-5 HCAPLUS

CN Acetic acid, [[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)



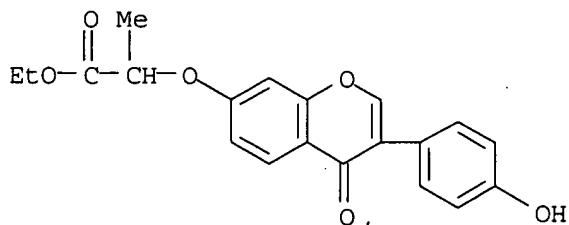
RN 38588-56-6 HCAPLUS

CN Acetic acid, [[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



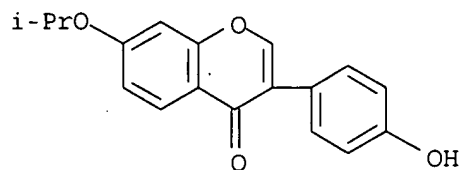
RN 38594-18-2 HCAPLUS

CN Propanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)

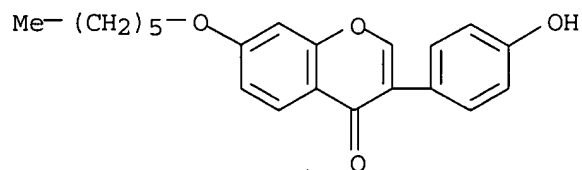


RN 97846-18-9 HCAPLUS

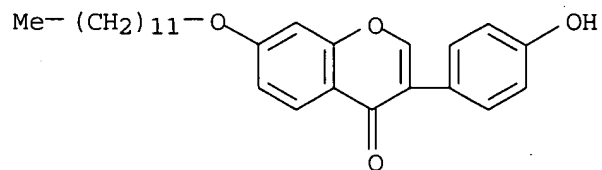
CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-(1-methylethoxy)- (9CI) (CA INDEX NAME)



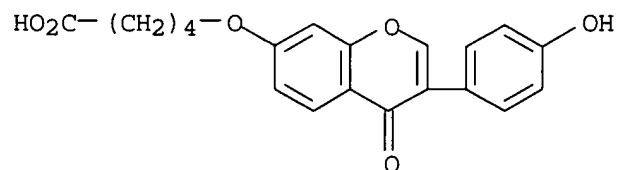
RN 371226-65-2 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(hexyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



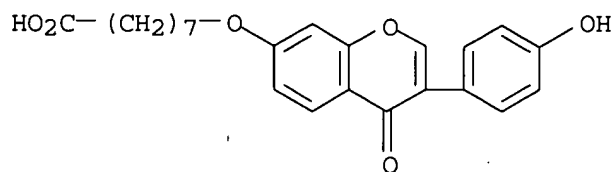
RN 371226-67-4 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(dodecyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 371226-71-0 HCAPLUS
 CN Pentanoic acid, 5-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)

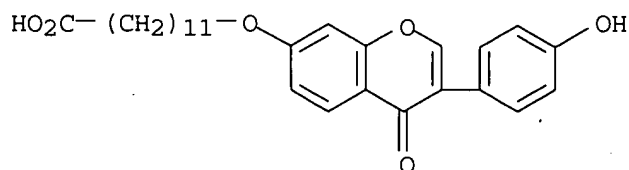


RN 371226-76-5 HCAPLUS
 CN Octanoic acid, 8-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



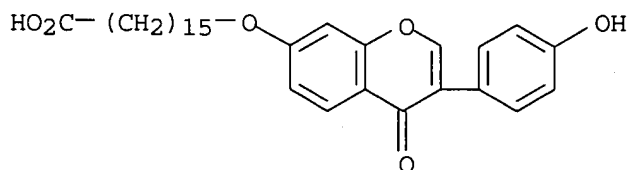
RN 371226-82-3 HCAPLUS

CN Dodecanoic acid, 12-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



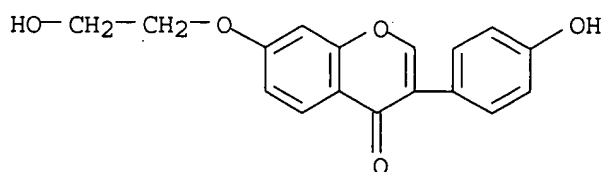
RN 371226-85-6 HCAPLUS

CN Hexadecanoic acid, 16-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



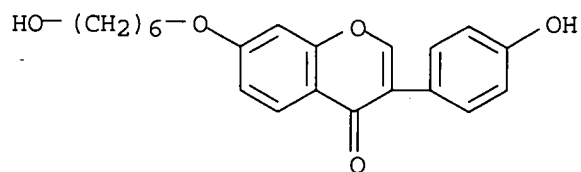
RN 371226-88-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(2-hydroxyethoxy)-3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)

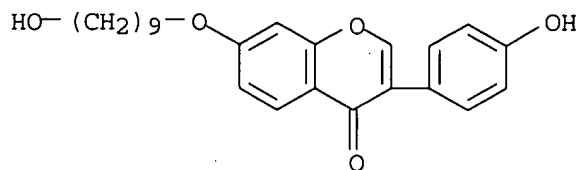


RN 371226-91-4 HCAPLUS

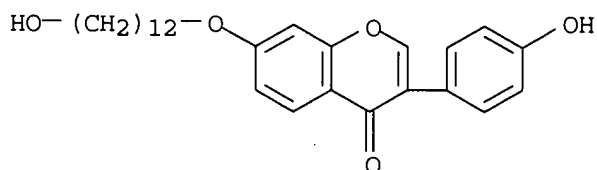
CN 4H-1-Benzopyran-4-one, 7-[(6-hydroxyhexyl)oxy]-3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)



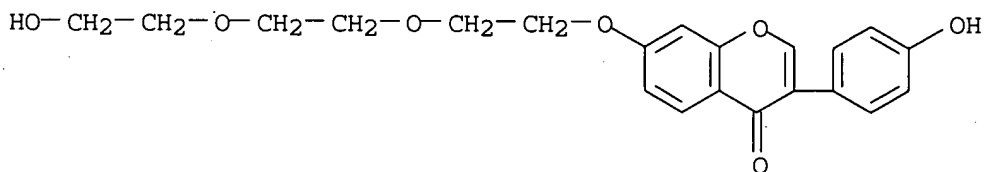
RN 371226-94-7 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(9-hydroxynonyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
 (CA INDEX NAME)



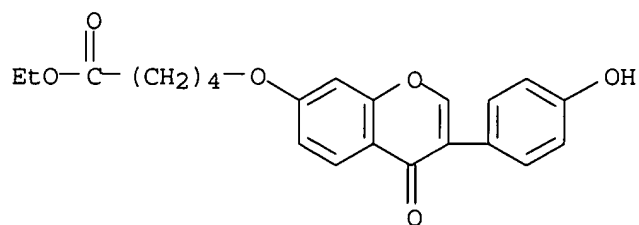
RN 371226-95-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(12-hydroxydodecyl)oxy]-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)



RN 371226-97-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[2-[2-(2-hydroxyethoxy)ethoxy]ethoxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

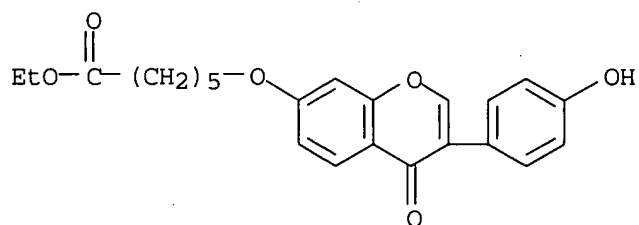


RN 371227-03-1 HCAPLUS
 CN Pentanoic acid, 5-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-,
 ethyl ester (9CI) (CA INDEX NAME)



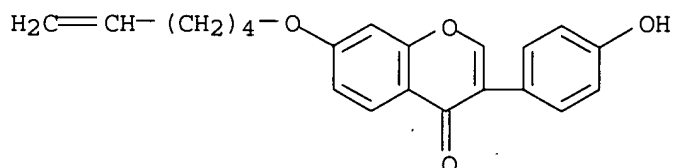
RN 371227-05-3 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -, ethyl ester (9CI) (CA INDEX NAME)



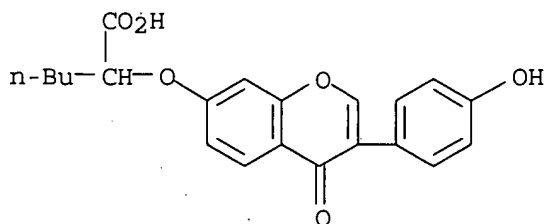
RN 371227-08-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(5-hexenyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



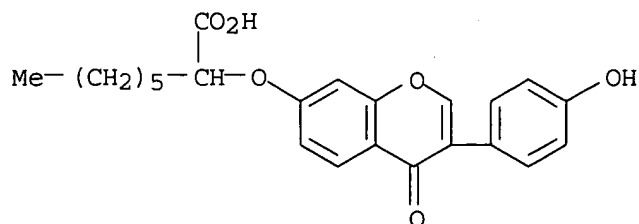
RN 371227-11-1 HCAPLUS

CN Hexanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)

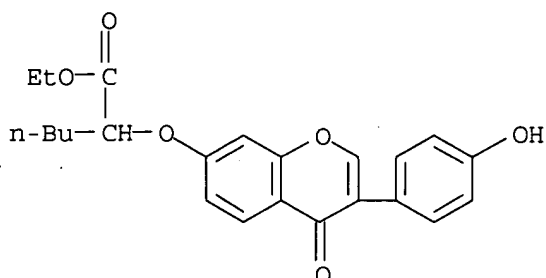


RN 371227-13-3 HCAPLUS

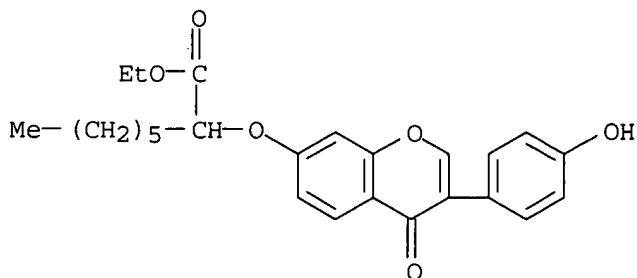
CN Octanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



RN 371227-16-6 HCAPLUS
 CN Hexanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)



RN 371227-18-8 HCAPLUS
 CN Octanoic acid, 2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:259658 HCAPLUS

DOCUMENT NUMBER: 135:88495

TITLE: Biogenic aldehyde(s) derived from the action of monoamine oxidase may mediate the antidipsotropic effect of daidzin

AUTHOR(S): Keung, W. M.

CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and Medicine, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Chemico-Biological Interactions (2001), 130-132(1-3), 919-930

CODEN: CBINA8; ISSN: 0009-2797

PUBLISHER: Elsevier Science Ireland Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Daidzin, a major active principle of an ancient herbal treatment for 'alc. addiction', was first shown to suppress ethanol intake in Syrian golden hamsters. Since then this activity has been confirmed in Wistar rats, Fawn hooded rats, genetically bred alc. preferring P rats and African green moneys under various exptl. conditions, including two-level operant, two-bottle free-choice, limited access, and alc.-deprivation paradigms. In vitro, daidzin is a potent and selective inhibitor of mitochondrial aldehyde dehydrogenase (ALDH-2). However, in vivo, it does not affect overall acetaldehyde metabolism in golden hamsters. Using isolated hamster liver mitochondria and 5-hydroxytryptamine (5-HT) and dopamine (DA) as the substrates, we demonstrated that daidzin inhibits the second but not the first step of the MAO/ALDH-2 pathway, the major pathway that catalyzes monoamine metabolism in mitochondria. Correlation studies using structural analogs of daidzin led to the hypothesis that the mitochondrial MAO/ALDH-2 pathway may be the site of action of daidzin and that one or more biogenic aldehydes such as 5-hydroxyindole-3-acetaldehyde (5-HIAL) and/or DOPAL derived from the action of monoamine oxidase (MAO) may be mediators of its antidipsotropic action.

IT 552-66-9, Daidzin

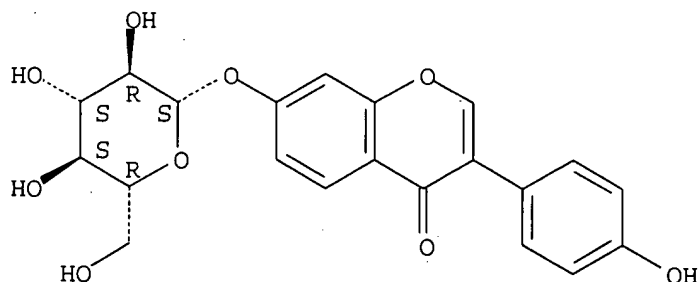
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(biogenic aldehyde(s) derived from the action of monoamine oxidase may mediate the antidipsotropic effect of daidzin)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:703406 HCAPLUS

DOCUMENT NUMBER: 134:13081

TITLE: The Mitochondrial Monoamine Oxidase-Aldehyde Dehydrogenase Pathway: A Potential Site of Action of Daidzin

AUTHOR(S): Rooke, Nadege; Li, Dian-Jun; Li, Junqing; Keung, Wing Ming

CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and

SOURCE: Medicine, Harvard Medical School, Boston, MA, 02115, USA
Journal of Medicinal Chemistry (2000), 43(22), 4169-4179
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

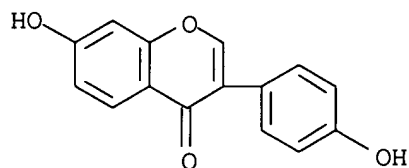
AB Recent studies showed that daidzin suppresses ethanol intake in ethanol-preferring laboratory animals. In vitro, it potently and selectively inhibits the mitochondrial aldehyde dehydrogenase (ALDH-2). Further, it inhibits the conversion of monoamines such as serotonin (5-HT) and dopamine (DA) into their resp. acid metabolites, 5-hydroxyindole-3-acetic acid (5-HIAA) and 3,4-dihydroxyphenylacetic acid (DOPAC) in isolated hamster or rat liver mitochondria. Studies on the suppression of ethanol intake and inhibition of 5-HIAA (or DOPAC) formation by six structural analogs of daidzin suggested a potential link between these two activities. This, together with the finding that daidzin does not affect the rates of mitochondria-catalyzed oxidative deamination of these monoamines, raised the possibility that the ethanol intake-suppressive (antidipsotropic) action of daidzin is not mediated by the monoamines but rather by their reactive biogenic aldehyde intermediates such as 5-hydroxyindole-3-acetaldehyde (5-HIAL) and/or 3,4-dihydroxyphenylacetaldehyde (DOPAL) which accumulate in the presence of daidzin. To further evaluate this possibility, we synthesized more structural analogs of daidzin and tested and compared their antidipsotropic activities in Syrian golden hamsters with their effects on monoamine metabolism in isolated hamster liver mitochondria using 5-HT as the substrate. Effects of daidzin and its structural analogs on the activities of monoamine oxidase (MAO) and ALDH-2, the key enzymes involved in 5-HT metabolism in the mitochondria, were also examined. Results from these studies reveal a pos. correlation between the antidipsotropic activities of these analogs and their abilities to increase 5-HIAL accumulation during 5-HT metabolism in isolated hamster liver mitochondria. Daidzin analogs that potently inhibit ALDH-2 but have no or little effect on MAO are most antidipsotropic, whereas those that also potently inhibit MAO exhibit little, if any, antidipsotropic activity. These results, although inconclusive, are consistent with the hypothesis that daidzin may act via the mitochondrial MAO/ALDH pathway and that a biogenic aldehyde such as 5-HIAL may be important in mediating its antidipsotropic action.

IT 486-66-8P, DAidzein 309252-39-9P
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

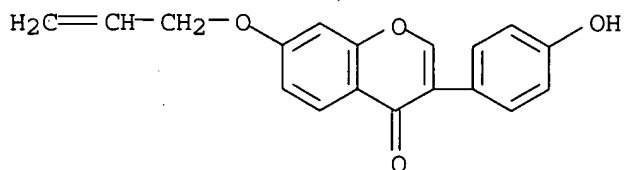
(mitochondrial MAO-aldehyde dehydrogenase pathway: daidzin derivs. action site)

RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 309252-39-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-(2-propenyloxy)- (9CI) (CA INDEX NAME)

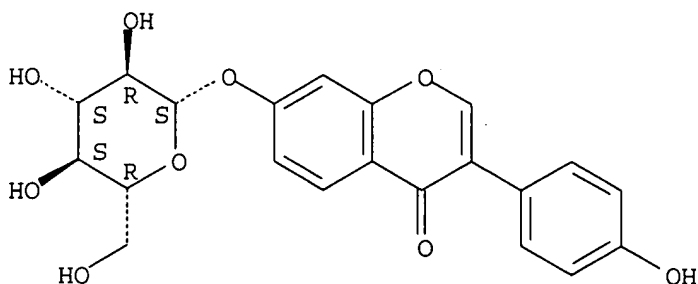


IT 552-66-9DP, Daidzin, analogs 552-66-9P
 146698-96-6P 146698-97-7P 146698-98-8P
 146698-99-9P 188881-56-3P 188881-57-4P
 250252-71-2P 250252-72-3P 250252-74-5P
 309252-38-8P

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
 (mitochondrial MAO-aldehyde dehydrogenase pathway: daidzin derivs. action site)

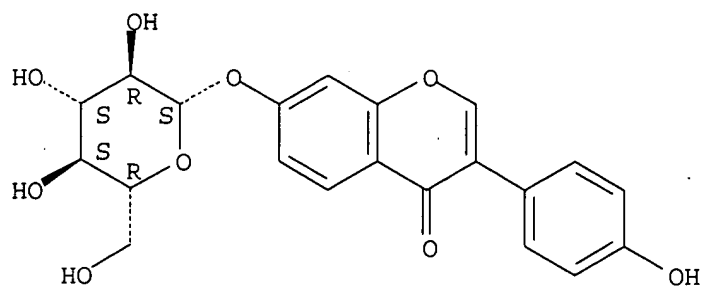
RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

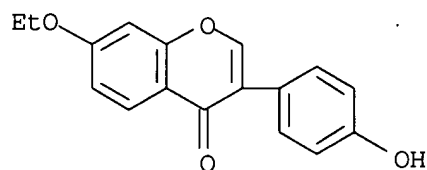


RN 552-66-9 HCAPLUS
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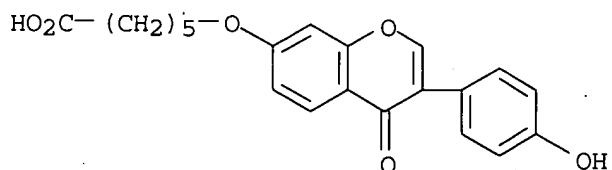
Absolute stereochemistry. Rotation (-).



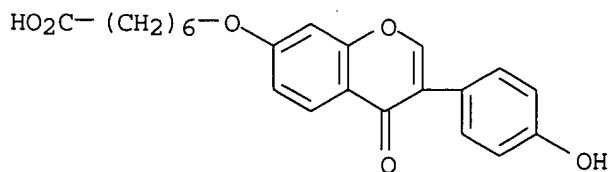
RN 146698-96-6 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



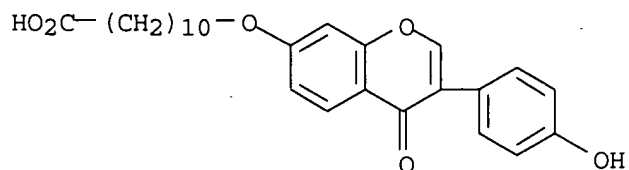
RN 146698-97-7 HCAPLUS
 CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



RN 146698-98-8 HCAPLUS
 CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)

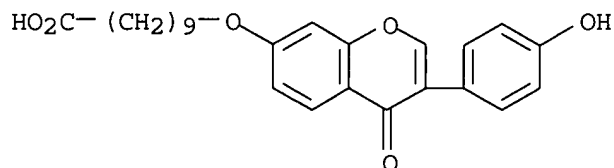


RN 146698-99-9 HCAPLUS
 CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



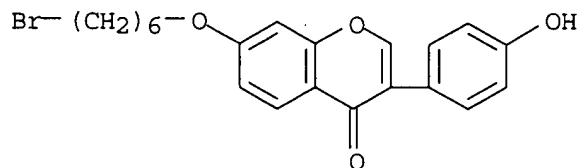
RN 188881-56-3 HCAPLUS

CN Decanoic acid, 10-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



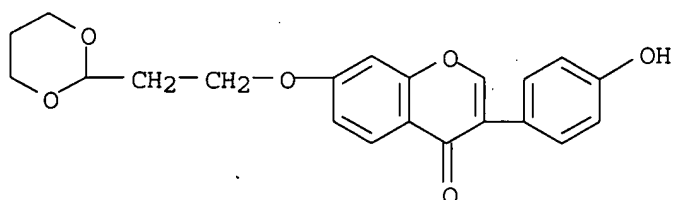
RN 188881-57-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-bromohexyl)oxy] - 3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)



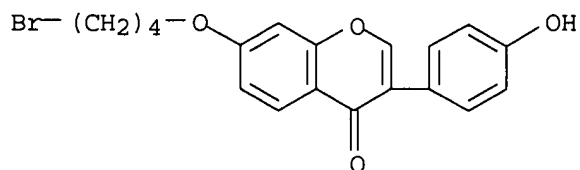
RN 250252-71-2 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[2-(1,3-dioxan-2-yl)ethoxy] - 3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)

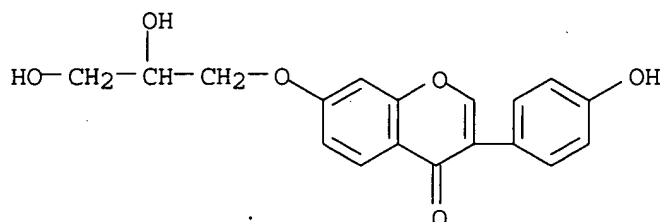


RN 250252-72-3 HCAPLUS

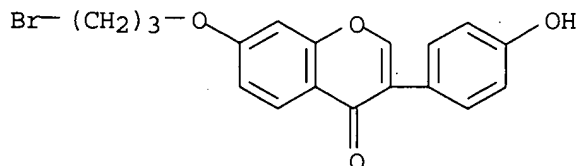
CN 4H-1-Benzopyran-4-one, 7-(4-bromobutoxy) - 3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)



RN 250252-74-5 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(2,3-dihydroxypropoxy)-3-(4-hydroxyphenyl)- (9CI)
 (CA INDEX NAME)

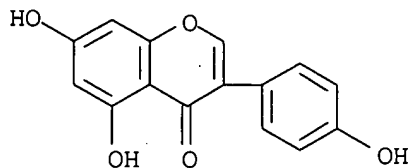


RN 309252-38-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(3-bromopropoxy)-3-(4-hydroxyphenyl)- (9CI) (CA
 INDEX NAME)



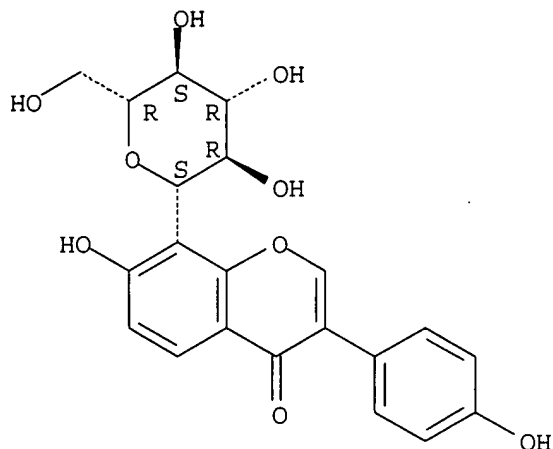
IT 446-72-0 3681-99-0
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological
 process); BSU (Biological study, unclassified); THU (Therapeutic use);
 BIOL (Biological study); PROC (Process); USES (Uses)
 (mitochondrial MAO-aldehyde dehydrogenase pathway: daidzin derivs.
 action site)

RN 446-72-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
 NAME)



RN 3681-99-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 8-beta-D-glucopyranosyl-7-hydroxy-3-(4-
 hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:173127 HCAPLUS

DOCUMENT NUMBER: 128:291383

TITLE: Daidzin and its antidipsotropic analogs inhibit serotonin and dopamine metabolism in isolated mitochondria

AUTHOR(S): Keung, Wing Ming; Vallee, Bert L.

CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and Medicine, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1998), 95(5), 2198-2203
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Daidzin, a major active principle of an ancient Chinese herbal treatment (*Radix puerariae*) for alc. abuse, selectively suppresses ethanol intake in all rodent models tested. It also inhibits mitochondrial aldehyde dehydrogenase (**ALDH-2**). Studies on ethanol intake suppression and in and **ALDH-2** inhibition by structural analogs of daidzin established a link between these two activities and suggested that daidzin may suppress ethanol intake by inhibiting **ALDH-2**. **ALDH-2** is a principal enzyme involved in serotonin (5-HT) and dopamine (DA) metabolism. Thus, daidzin may act by inhibiting 5-HT and DA metabolism. To evaluate this possibility, we have studied the effect of daidzin and its analogs on 5-HT and DA metabolism in isolated hamster and rat liver mitochondria. Daidzin potently inhibits the formation of 5-hydroxyindole-3-acetic acid (5-HIAA) and 3,4-dihydroxyphenylacetic acid (DOPAC) from their resp. amines in isolated mitochondria. Inhibition is concentration-dependent and is accompanied

by a concomitant accumulation of 5-hydroxyindole-3-acetaldehyde and 3,4-dihydroxyphenylacetaldehyde. Daidzin analogs that suppress hamster ethanol intake also inhibit 5-HIAA and DOPAC formation. Comparing their

effects on mitochondria-catalyzed 5-HIAA or DOPAC formation and hamster ethanol intake reveals a pos. correlation-the stronger the inhibition on 5-HIAA or DOPAC formation, the greater the ethanol intake suppression. Daidzin and its active analogs, at concns. that significantly inhibit 5-HIAA formation, have little or no effect on mitochondria-catalyzed 5-HT depletion. It appears that the antidipsotropic action of daidzin is not mediated by 5-HT (or DA) but rather by its reactive intermediates 5-hydroxyindole-3-acetaldehyde and, presumably, 3,4-dihydroxyphenylacetaldehyde as well, which accumulates in the presence of daidzin.

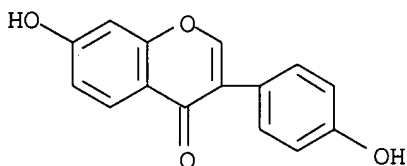
IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
 , Puerarin 146698-97-7 146698-98-8 188881-56-3
 206051-01-6

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(daidzin and its antidipsotropic analogs inhibit serotonin and dopamine metabolism in isolated mitochondria)

RN 486-66-8 HCAPLUS

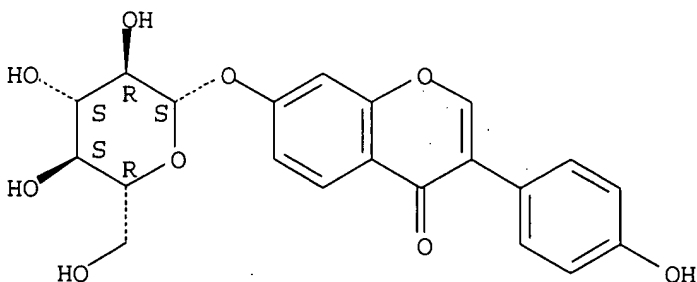
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

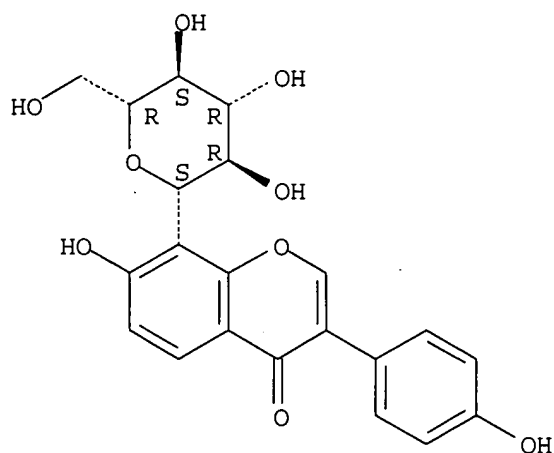
Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS

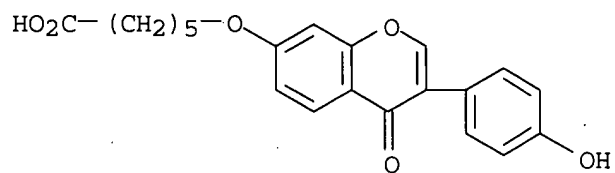
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



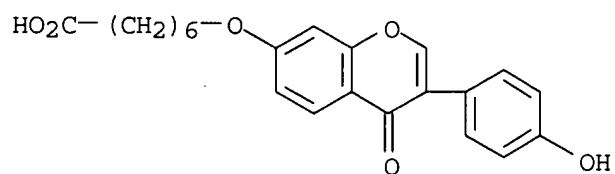
RN 146698-97-7 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-(9CI) (CA INDEX NAME)



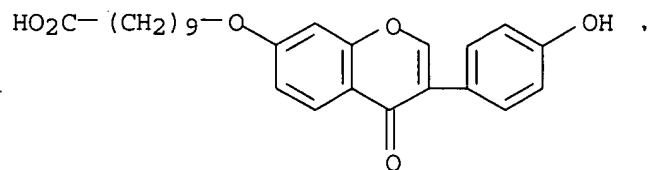
RN 146698-98-8 HCAPLUS

CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-(9CI) (CA INDEX NAME)



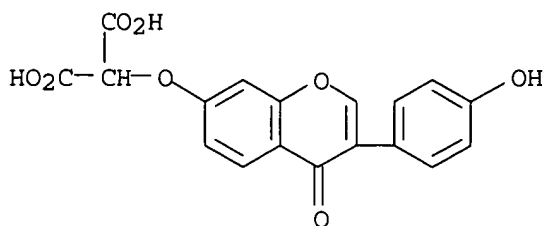
RN 188881-56-3 HCAPLUS

CN Decanoic acid, 10-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-(9CI) (CA INDEX NAME)



RN 206051-01-6 HCAPLUS

CN Propanedioic acid, [[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:172678 HCAPLUS

DOCUMENT NUMBER: 126:260370

TITLE: Daidzin inhibits mitochondrial aldehyde dehydrogenase and suppresses ethanol intake of Syrian golden hamsters

AUTHOR(S): Keung, Wing Ming; Klyosov, Anatole K.; Vallee, Bert L.
CORPORATE SOURCE: Cent. Biochemical Biophysical Sci. Med., Harvard Med. Sch., Boston, MA, 02115, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1997), 94(5), 1675-1679
CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Daidzin is the major active principle in exts. of radix puerariae, a traditional Chinese medication that suppresses the ethanol intake of Syrian golden hamsters. It is the first isoflavone recognized to have this effect. Daidzin is also a potent and selective inhibitor of human mitochondrial aldehyde dehydrogenase (ALDH-2). To establish a link between these two activities, we have tested a series of synthetic structural analogs of daidzin. The results demonstrate a direct correlation between ALDH-2 inhibition and ethanol intake suppression and raise the possibility that daidzin may, in fact, suppress ethanol intake of golden hamsters by inhibiting ALDH-2. Hamster liver contains not only mitochondrial ALDH-2 but also high concns. of a cytosolic form, ALDH-1, which is a very efficient catalyst of acetaldehyde oxidation. Further, the cytosolic isoenzyme is completely resistant to daidzin inhibition. This unusual property of the hamster ALDH-1 isoenzyme accounts for the fact we previously observed that daidzin can suppress ethanol intake of this species without blocking acetaldehyde metabolism. Thus, the mechanism by which daidzin suppresses ethanol intake in golden hamsters clearly differs from that proposed for the classic ALDH inhibitor disulfiram. We postulate that a physiol. pathway catalyzed by ALDH-2, so far undefined, controls ethanol intake of golden hamsters and mediates the antidipsotropic effect of daidzin.

IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
, Puerarin 146698-96-6 146698-97-7 146698-98-8
146698-99-9 188881-56-3 188881-57-4
188881-58-5 188881-59-6 188881-60-9
188881-61-0 188881-62-1 188881-63-2

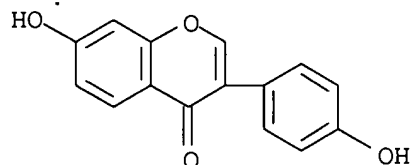
188881-64-3

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(daidzin derivs. inhibition of mitochondrial aldehyde dehydrogenase and ethanol intake)

RN 486-66-8 HCAPLUS

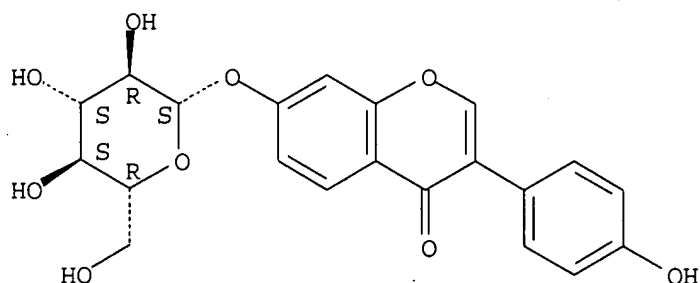
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

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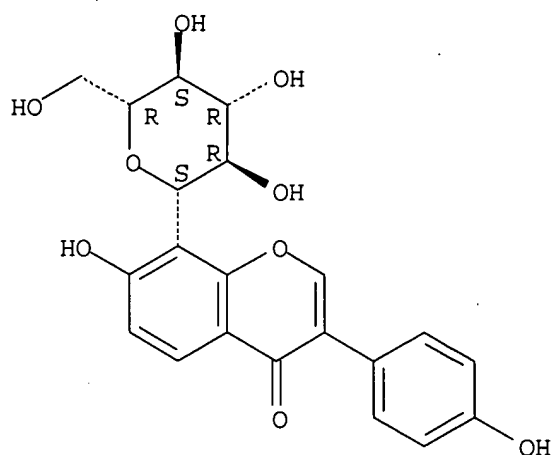
Absolute stereochemistry. Rotation (-).



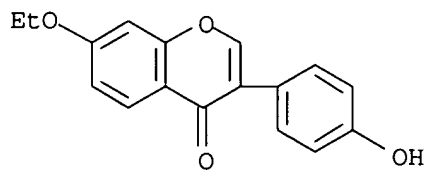
RN 3681-99-0 HCAPLUS

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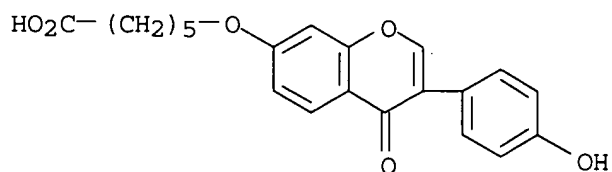
Absolute stereochemistry.



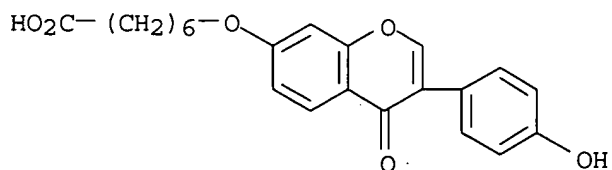
RN 146698-96-6 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 146698-97-7 HCAPLUS
 CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)

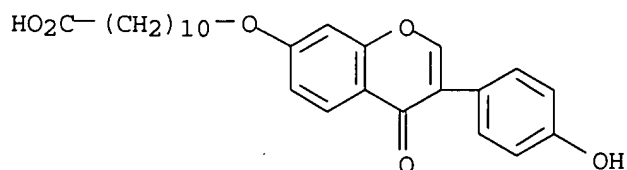


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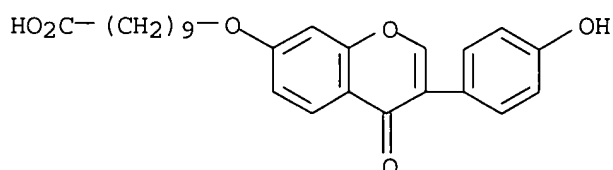
RN 146698-99-9 HCAPLUS

CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -
(9CI) (CA INDEX NAME)



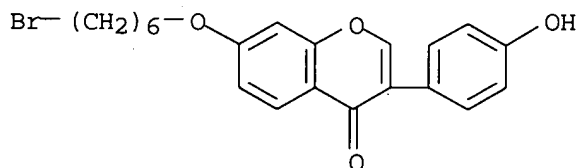
RN 188881-56-3 HCAPLUS

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(9CI) (CA INDEX NAME)



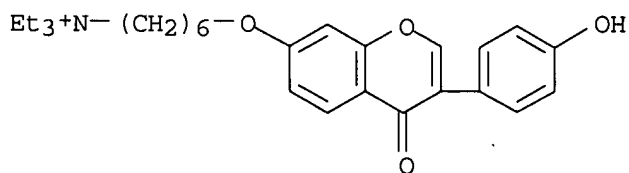
RN 188881-57-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-bromohexyl)oxy]-3-(4-hydroxyphenyl) - (9CI)
(CA INDEX NAME)



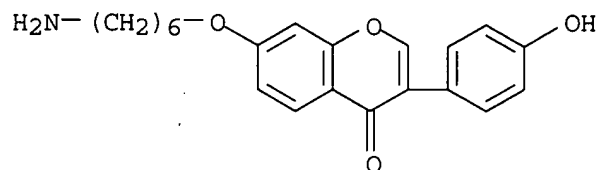
RN 188881-58-5 HCAPLUS

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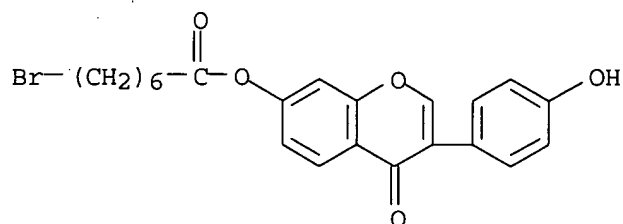
RN 188881-59-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-aminoethyl)oxy]-3-(4-hydroxyphenyl) - (9CI)
(CA INDEX NAME)



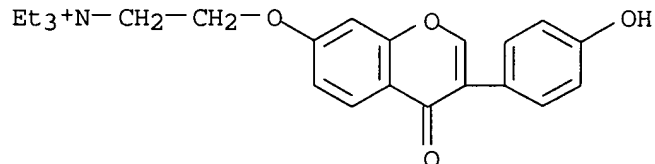
RN 188881-60-9 HCAPLUS

CN Heptanoic acid, 7-bromo-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



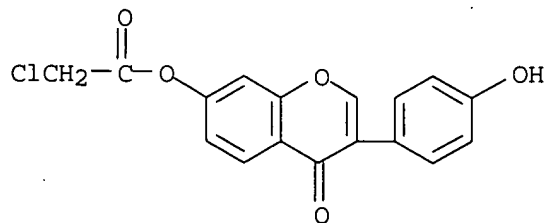
RN 188881-61-0 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



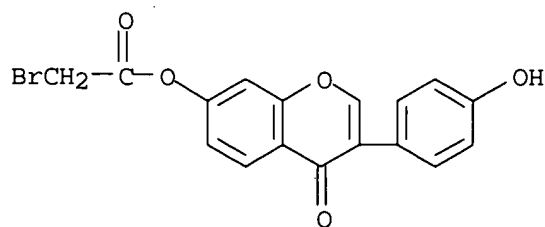
RN 188881-62-1 HCAPLUS

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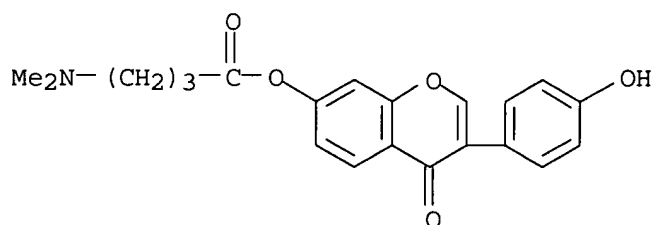


RN 188881-63-2 HCAPLUS

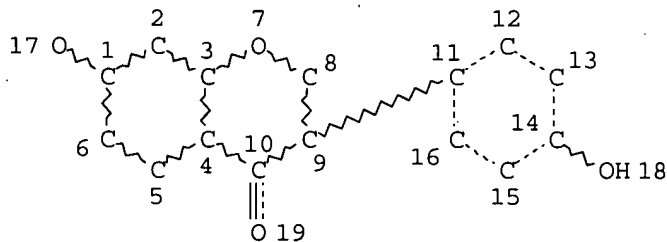
CN Acetic acid, bromo-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



RN 188881-64-3 HCAPLUS
 CN Butanoic acid, 4-(dimethylamino)-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)



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NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L3 1168 SEA FILE=REGISTRY SSS FUL L1
 L4 48 SEA FILE=REGISTRY ABB=ON PLU=ON ALDH2 OR ALDH(L)2
 L6 27 SEA FILE=REGISTRY ABB=ON PLU=ON ALCOHOL DEHYDROGENASE 2?/CN
 L10 3 SEA FILE=REGISTRY ABB=ON PLU=ON ("5-HYDROXYINDOLE-3-ACETIC ACID"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID GLUCURONIDE"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID O-GLUCURONIDE"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID SULFATE"/CN)
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 ACID 3,4-DIHYDROXYPHENETHYLAMIDE"/CN OR "3,4-DIHYDROXYPHENYLACE
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 ETHYL ESTER"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID GLUCURONIDE"
 /CN OR "3,4-DIHYDROXYPHENYLACETIC ACID POLYMER"/CN)

L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON 5-HYDROXYINDOLE-3-ACETALDEHYD
 E/CN

L13 16 SEA FILE=REGISTRY ABB=ON PLU=ON DIHYDROXYPHENYL (L) ACETALDEH
 YDE

L14 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROXYINDOLE (L) ACETALDEHYD
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L15 6832 SEA FILE=HCAPLUS ABB=ON PLU=ON L3

L16 684 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR L4 OR ALDH2 OR ALDH
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L17 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L16

L18 9710 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 OR L11 OR L12 OR L13 OR
 L14 OR (HYDROXYINDOL? OR DIHYDROXYPHENYL) (2A) (ACETIC (W)
 ACID OR ACETALDEHYDE)

L19 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L18

L20 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 NOT L17

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L20 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:85810 HCAPLUS

DOCUMENT NUMBER: 139:122906

TITLE: Microemulsion electrokinetic chromatographic analysis
 of some polar compounds

AUTHOR(S): Siren, Heli; Karttunen, Anne

CORPORATE SOURCE: Technical Research Centre, VTT Processes, Espoo,
 FIN-02044, Finland

SOURCE: Journal of Chromatography, B: Analytical Technologies
 in the Biomedical and Life Sciences (2003), 783(1),
 113-124
 CODEN: JCBAAI; ISSN: 1570-0232

PUBLISHER: Elsevier Science B.V.

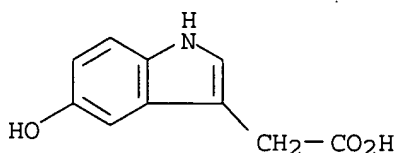
DOCUMENT TYPE: Journal

LANGUAGE: English

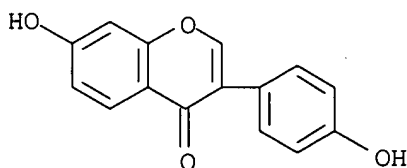
AB This study presents the optimization of a microemulsion electrokinetic
 chromatog. (MEEKC) electrolyte solution by using UV detection and with the
 method, simultaneous sepns. of chemical, biochem. and pharmaceutically
 related anionic and cationic compds. Representatives of the compound groups
 were from isoflavonoids, benzodiazepines, metanephrines, diuretics and
 peptide hormones. The MEEKC sepns. under basic conditions were first
 optimized using a two-component isoflavonoid mixture as the sample and an
 electrolyte containing 10 mM tetraborate as the main buffer (pH 9.5). The
 stable microemulsion phase was adjusted with various amts. of octane,
 1-butanol and sodium dodecyl sulfate (SDS). An only acidified electrolyte
 solution used in the study was made of phosphoric acid (pH 1.8) containing
 octane, SDS and Et acetate. The analyses with isoflavonoids showed that
 electrophoretic mobilities of the investigated compds. were highly related
 to the concns. of SDS and 1-butanol with linear and parabolic correlation,
 resp. However, addition of octane gave linear correlation only at low
 concns. In most cases four to six structurally related compds. and even
 13 diuretics with various polar properties were separated from each other in

basic microemulsion medium. The acidified MEEKC electrolyte gave good resolution for anionic metanephtrines.

IT 54-16-0, 5-Hydroxyindoleacetic acid, analysis 486-66-8,
7-Hydroxy-3-(4-hydroxyphenyl)-4H-1-benzopyran-4-one
RL: ANT (Analyte); ANST (Analytical study)
(determination of drugs by microemulsion electrokinetic chromatog.)
RN 54-16-0 HCAPLUS
CN 1H-Indole-3-acetic acid, 5-hydroxy- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:736472 HCAPLUS

DOCUMENT NUMBER: 131:333371

TITLE: Methods and assays useful in the treatment of alcohol dependence or alcohol abuse

INVENTOR(S): Vallee, Bert L.; Keung, Wing-Ming

PATENT ASSIGNEE(S): The Endowment for Research In Human Biology, Inc., USA

SOURCE: PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9958124	A1	19991118	WO 1999-US10339	19990512
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

CA 2334830 AA 19991118 CA 1999-2334830 19990512
 AU 9938991 A1 19991129 AU 1999-38991 19990512
 US 6121010 A 20000919 US 1999-310614 19990512
 EP 1077697 A1 20010228 EP 1999-921892 19990512

R: CH, DE, FR, GB, IT, LI, FI

PRIORITY APPLN. INFO.:

US 1998-85148P P 19980512

WO 1999-US10339 W 19990512

AB A method for the treatment of alc. abuse using daidzin and compds. analogous to daidzin is disclosed. Also disclosed is a method for screening compds. having antidipsotropic activity.

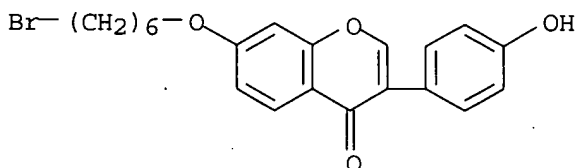
IT **188881-57-4P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(methods and assays useful in treatment of alc. dependence or alc. abuse)

RN 188881-57-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-bromohexyl)oxy]-3-(4-hydroxyphenyl)- (9CI)
(CA INDEX NAME)



IT **552-66-9**, Daidzin **552-66-9D**, Daidzin, analogs

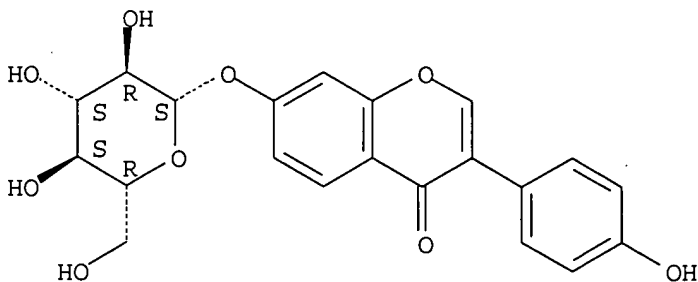
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(methods and assays useful in treatment of alc. dependence or alc. abuse)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

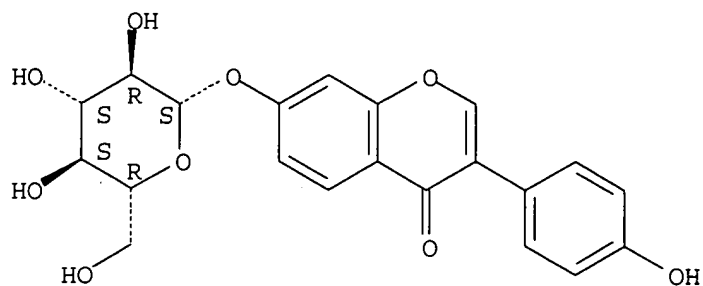
Absolute stereochemistry. Rotation (-).



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

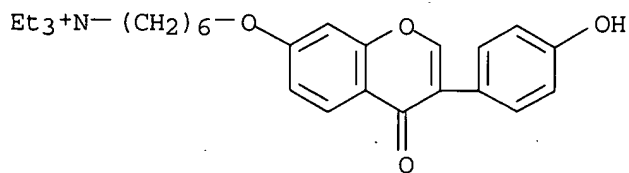


IT 188881-58-5P 188881-59-6P 188881-61-0P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(methods and assays useful in treatment of alc. dependence or alc. abuse)

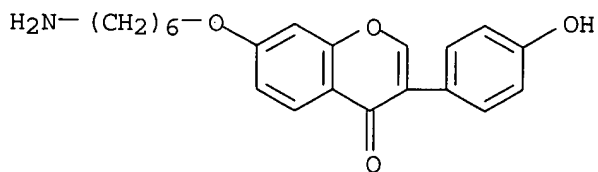
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CN 1-Hexanaminium, N,N,N-triethyl-6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



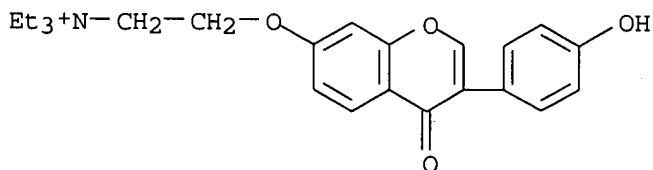
RN 188881-59-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-aminohexyl)oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 188881-61-0 HCAPLUS

CN Ethanaminium, N,N,N-triethyl-2-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy]- (9CI) (CA INDEX NAME)



IT 486-66-8, Daidzein 3681-99-0, Puerarin

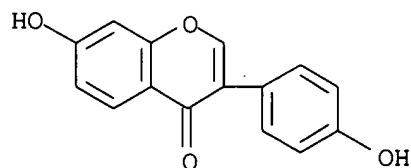
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 188881-62-1 188881-63-2 188881-64-3
 250252-71-2 250252-72-3 250252-73-4
 250252-74-5

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(methods and assays useful in treatment of alc. dependence or alc. abuse)

RN 486-66-8 HCAPLUS

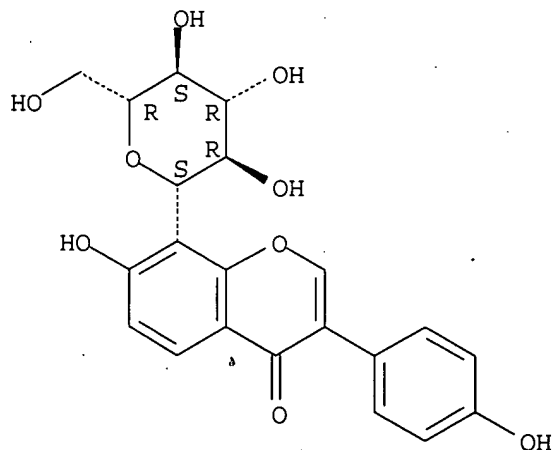
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 3681-99-0 HCAPLUS

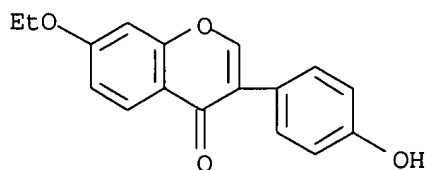
CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

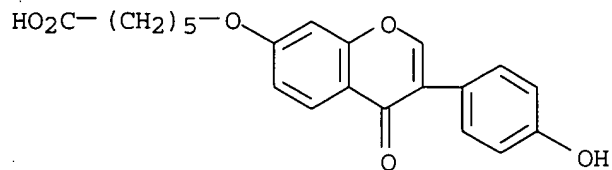


RN 146698-96-6 HCAPLUS

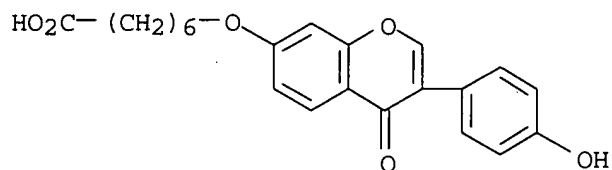
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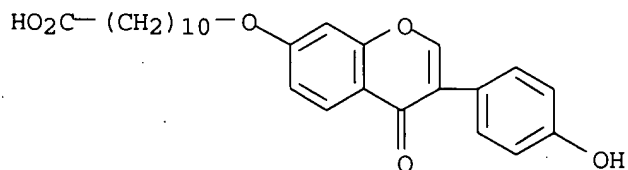
RN 146698-97-7 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -
(9CI) (CA INDEX NAME)

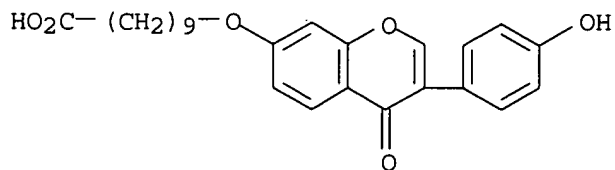
RN 146698-98-8 HCAPLUS

CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -
(9CI) (CA INDEX NAME)

RN 146698-99-9 HCAPLUS

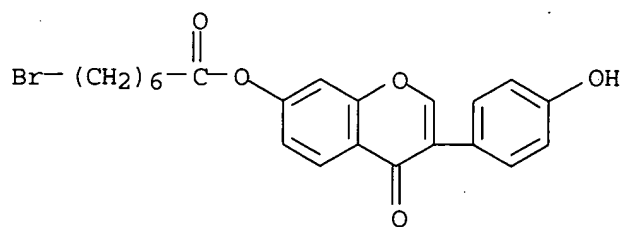
CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -
(9CI) (CA INDEX NAME)

RN 188881-56-3 HCAPLUS

CN Decanoic acid, 10-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] -
(9CI) (CA INDEX NAME)

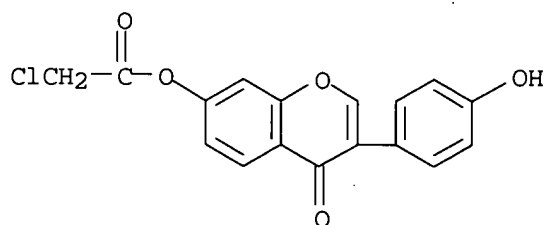
RN 188881-60-9 HCAPLUS

CN Heptanoic acid, 7-bromo-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl
ester (9CI) (CA INDEX NAME)



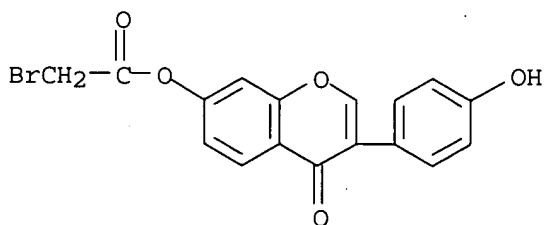
RN 188881-62-1 HCAPLUS

CN Acetic acid, chloro-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester
(9CI) (CA INDEX NAME)



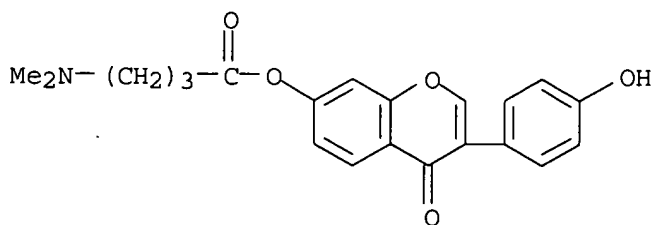
RN 188881-63-2 HCAPLUS

CN Acetic acid, bromo-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester
(9CI) (CA INDEX NAME)



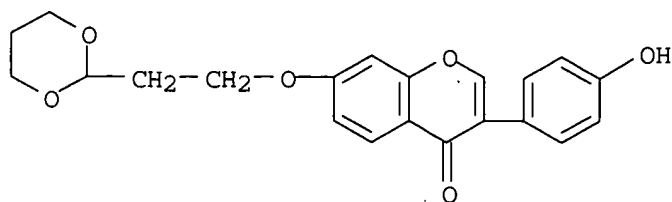
RN 188881-64-3 HCAPLUS

CN Butanoic acid, 4-(dimethylamino)-, 3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl ester (9CI) (CA INDEX NAME)

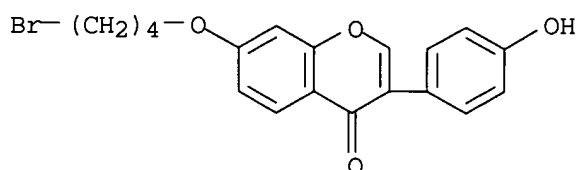


RN 250252-71-2 HCAPLUS

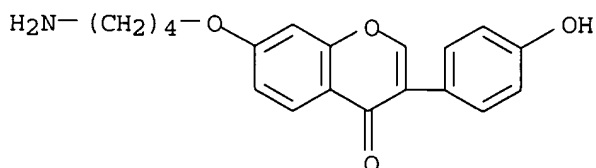
CN 4H-1-Benzopyran-4-one, 7-[2-(1,3-dioxan-2-yl)ethoxy]-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)



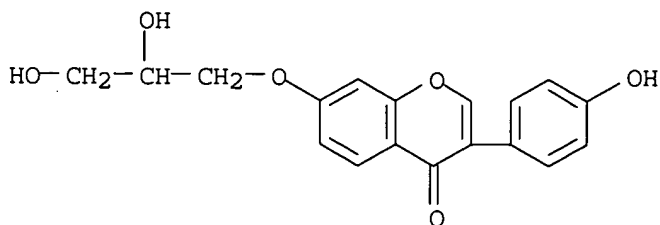
RN 250252-72-3 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(4-bromobutoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 250252-73-4 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(4-aminobutoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

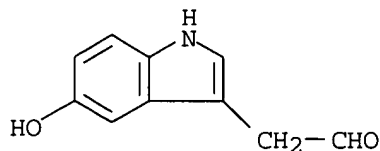


RN 250252-74-5 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(2,3-dihydroxypropoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



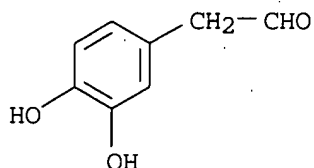
IT 1892-21-3, 5-Hydroxyindole-3-acetaldehyde
 5707-55-1, 3,4-Dihydroxyphenylacetaldehyde
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (methods and assays useful in treatment of alc. dependence or alc. abuse)
 RN 1892-21-3 HCAPLUS

CN 1H-Indole-3-acetaldehyde, 5-hydroxy- (9CI) (CA INDEX NAME)



RN 5707-55-1 HCAPLUS

CN Benzeneacetaldehyde, 3,4-dihydroxy- (9CI) (CA INDEX NAME)

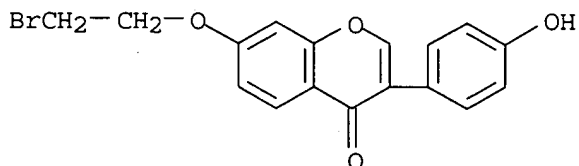


IT 250252-70-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (methods and assays useful in treatment of alc. dependence or alc. abuse)

RN 250252-70-1 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(2-bromoethoxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:202795 HCAPLUS

DOCUMENT NUMBER: 114:202795

TITLE: A rapid, high-resolution high performance liquid chromatography profiling procedure for plant and microbial aromatic secondary metabolites

AUTHOR(S): Graham, Terrence L.

CORPORATE SOURCE: Dep. Plant Pathol., Ohio State Univ., Columbus, OH, 43210, USA

SOURCE: Plant Physiology (1991), 95(2), 584-93

CODEN: PLPHAY; ISSN: 0032-0889

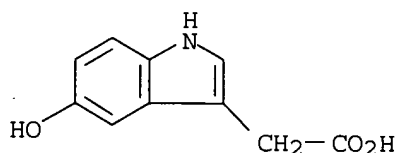
DOCUMENT TYPE: Journal

LANGUAGE: English

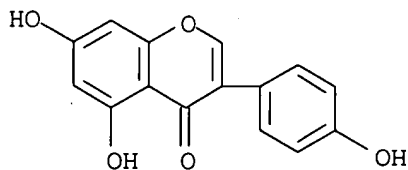
AB High performance liquid chromatog. protocols have been developed to allow the simultaneous anal. of a very wide range of soluble aromatic secondary metabolites in unfractionated biol. exts. The methods are simple,

sensitive, and highly reproducible. They are applicable to a wide variety of natural product investigations in both plants and microorganisms. High resolution of metabolites is achieved in 25 min by chromatog. on a reverse phase C18 column in a gradient of 0 to 55% acetonitrile in water at pH 3. For example, near-baseline resolution of over 20 phenylpropanoid metabolites and 18 naturally occurring metabolites of indole-3-acetic acid can be obtained. The methods can be applied directly to whole tissue exts. without prepurifn. or enrichment. Moreover, the simplicity and sensitivity of the protocols allow their application to a large number of very small tissue samples, such as those encountered in research on host-microbe interactions. Such profiles allow one to monitor simultaneously the various alternative metabolic fates of a complex array of mols. Examination of the profiles over time thus provides one with a powerful tool to correlate many concurrent mol. events that may relate to a given biol. phenomenon. The final protocol requires as little as 1 mg of tissue, which is extracted directly in a microfuge tube in 80% ethanol. With a variable wavelength detector, as little as 100 fmol of a given metabolite can be analyzed. Examples of the application of the protocols to a number of plant and microbial secondary product investigations and to screening for flavonoid mutants of *Arabidopsis thaliana* are given.

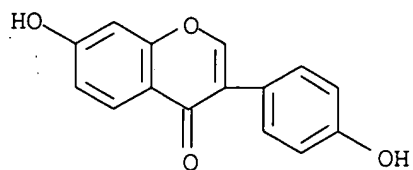
IT 54-16-0, analysis 446-72-0, Genistein 486-66-8
 , Daidzein 529-59-9, Genistin 552-66-9, Daidzin
 51011-05-3 124590-31-4
 RL: ANT (Analyte); ANST (Analytical study)
 (chromatog. of, high-performance liquid)
 RN 54-16-0 HCAPLUS
 CN 1H-Indole-3-acetic acid, 5-hydroxy- (9CI) (CA INDEX NAME)



RN 446-72-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



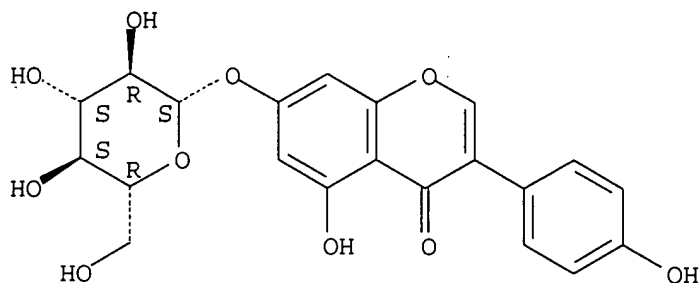
RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

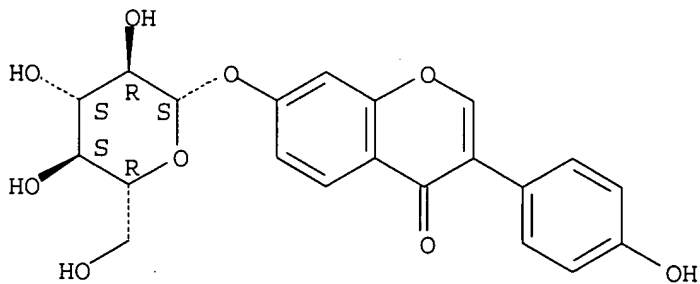
Absolute stereochemistry.



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

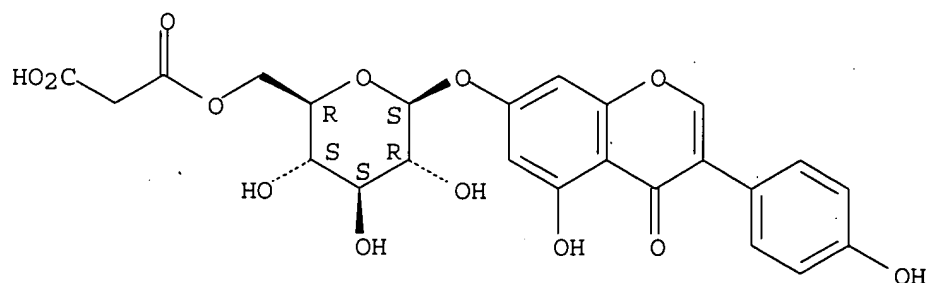
Absolute stereochemistry. Rotation (-).



RN 51011-05-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)- β -D-glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

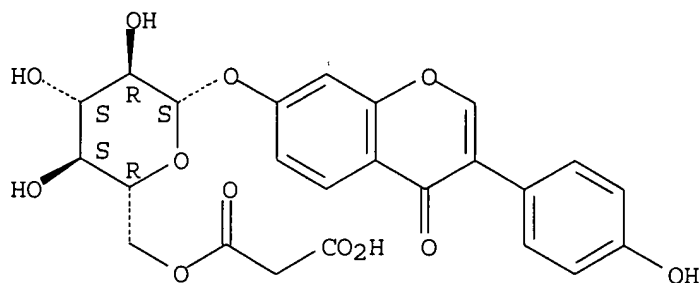
Absolute stereochemistry.



RN 124590-31-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L20 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1959:14750 HCAPLUS

DOCUMENT NUMBER: 53:14750

ORIGINAL REFERENCE NO.: 53:2735e-i,2736a-d

TITLE: Paper chromatography and paper electrophoresis of phenols and glycosides

AUTHOR(S): Coulson, C. B.; Evans, W. C.

CORPORATE SOURCE: Univ. Coll. North Wales, Bangor

SOURCE: Journal of Chromatography (1958), 1, 374-9

CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The following Rf values and spot colorations with diazotized p-nitroaniline spray were obtained by ascending chromatography on Whatman Number 4 paper with C6H6-AcOH-H2O (20:5:saturation) (solvent A) and BuOH-EtOH-borate buffer (9.54 g. Na2B4O7/1.) (1:1:1) (solvent B), resp.: pyrocatechol 0.43, cherry purple, 0.70, brown; homocatechol 0.56, red-purple, 0.72, brown-red; phloroglucinol 0.00, yellow-orange, 0.87, reddish mustard yellow; resorcinol 0.12, yellow-orange, 0.94, mustard yellow; saligenin 0.62, crimson, 0.74, brown-yellow; 8-quinolinol 0.60, purple, -, -; 3,4-dihydroxy-*o*-chloroacetophenone 0.21, pale yellow, 0.62, yellow; dinitrophenylglycine 0.71, -, 0.70, -; dinitrophenylethanolamine 0.88, -, 0.90, -; *o*-HOC6H4CO2H 1.00, bright red, 0.74, yellow-red; *m*-HOC6H4CO2H 0.50, scarlet, 0.68, red; *p*-HOC6H4CO2H 0.42, light crimson, 0.65, red; *o*-HOC6H4CH2CH2CO2H 0.70, mauve, 0.79, red-mauve; *m*-HOC6H4CH2CH2CO2H 0.55, pink, 0.76, bright crimson; *p*-HOC6H4CH2CH2CO2H 0.53, blue-purple, 0.73, blue-purple;

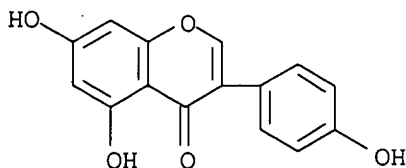
cis-o-HOC₆H₄CH:CHCO₂H -, -, 0.81, purple; trans-o-HOC₆H₄CH:CHCO₂H 0.65, bluish mauve, 0.74, purple; m-HOC₆H₄CH:CHCO₂H 0.53, crimson, 0.70, crimson; p-HOC₆H₄CH:CHCO₂H 0.50, bright blue, 0.66, blue-gray; o-hydroxyphenylglyoxylic acid 0.22, salmon, 0.83, salmon; p-hydroxyphenylpyruvic acid 0.44, purple, 0.70, purple; 2,3-(HO)2C₆H₃CO₂H 0.43, cherry purple, 0.49, pale brown; 2,4-(HO)2C₆H₃CO₂H 0.30, brown-mustard, 0.53, reddish brown; 2,5-(HO)2C₆H₃CO₂H 0.20, yellow, 0.55-0.85, pale reddish brown; 2,6-(HO)2C₆H₃CO₂H 0.16, yellow, 0.78, brown-gray; 3,4-(HO)2C₆H₃CO₂H 0.08, cherry red, 0.30, brown; 3,5-(HO)2C₆H₃CO₂H 0.02, bright yellow, 0.54, yellow; 2,3-(HO)2C₆H₃CH₂CO₂H 0.15, cherry purple, -, -; 2,5-(HO)2C₆H₃CH₂CO₂H (I) 0.03, brown, 0.65, white; 3,4-(HO)2C₆H₃CH₂CO₂H 0.05, cherry red, 0.39, light brown; 2,3-(HO)2C₆H₃CH₂CH₂CO₂H 0.28, cherry purple, 0.45, medium orange; 2,5-(HO)2C₆H₃CH₂CH₂CO₂H 0.09, brown, -, -; 3,4-(HO)2C₆H₃CH₂CH₂CO₂H 0.13, cherry red, 0.42, quenched red; 2,5-(HO)2C₆H₃CH:CHCO₂H 0.04, yellow, 0.4-0.6, pale brown; 3,4-(HO)2C₆H₃CH:CHCO₂H 0.08, brownish purple, 0.40, gray-brown; 3,1,2-HOC₆H₃(CO₂H)₂, none, -, none; 4,1,2-HOC₆H₃(CO₂H)₂ 0.02, bright crimson, 0.41, red; 3,4,1,2-(HO)2C₆H₂(CO₂H)₂ 0.02, red, 0.20, quenched orange; 4,5,1,2-(HO)2C₆H₂(CO₂H)₂ 0.01, pink, -, -; I lactone 0.03, light brown, streak, brown; 2,5-dihydroxyphenylpyruvic acid lactone 0.20, yellow-orange, 0.79, mustard yellow; 2,5-(HO)2C₆H₃CHO 0.63, pale yellow, 0.93, white; 3,4-(HO)2C₆H₃CHO 0.13, pale yellow, 0.62, white. Results were obtained in 8 and 18 hrs., resp., with solvents A and B. Sugars and related compds., chromatographed on paper buffered with borate buffer, with solvent B and alkaline AgNO₃ to detect the spots, showed the following R_f values: arabinose 0.22, arbutin 0.72, ascorbic acid 0.28, erythritol 0.27, fructose 0.23, fucose 0.40, galactose 0.27, glucosamine 0.24-0.40, glucose 0.28, glucuronic acid lactone 0.20, inositol 0.24, mannitol 0.30, quinic acid 0.42, raffinose 0.25, rhamnose 0.77, salicin 0.77, shikimic acid 0.27, sorbitol 0.29, sorbose 0.25, sucrose 0.42, xylose 0.23. Glycosides and aglycones chromatographed on buffer-impregnated paper in solvent B showed the following R_f values (ultraviolet light): quercetrin (II) 0.44, phlorizin 0.79, rutin (III) 0.29, d-catechol 0.45, fisetin 0.40, formononetin 0.91, genistein 0.86, khellin 0.92, morin 0.10, myricetin 0.15, quercetin (IV) 0.38, robinetin 0.12, tricin 0.50, dinitrophenylethanolamine 0.90, dinitrophenylglycine 0.70; II, III, and IV showed R_f 0.69, 0.29, and 0.25, resp., with BuOH-EtOH-Consden's borate buffer (Consden and Stanier C.A. 47, 664h). Many of these compds. were subjected to chromatographic techniques following horizontal paper electrophoresis, and the ratio of migration of substance to migration of dinitrophenylglycine is tabulated.

IT 446-72-0, Genistein

(chromatography and electrophoresis of)

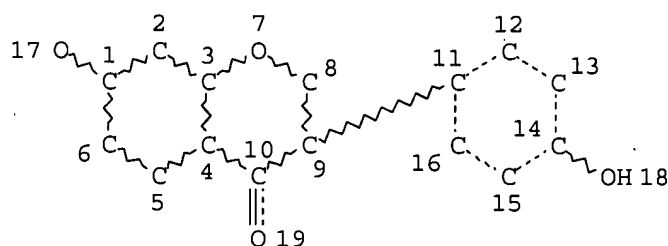
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



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L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L3 1168 SEA FILE=REGISTRY SSS FUL L1
 L4 48 SEA FILE=REGISTRY ABB=ON PLU=ON ALDH2 OR ALDH(L) 2
 L6 27 SEA FILE=REGISTRY ABB=ON PLU=ON ALCOHOL DEHYDROGENASE 2?/CN
 L10 3 SEA FILE=REGISTRY ABB=ON PLU=ON ("5-HYDROXYINDOLE-3-ACETIC
 ACID"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID GLUCURONIDE"/CN OR
 "5-HYDROXYINDOLE-3-ACETIC ACID O-GLUCURONIDE"/CN OR "5-HYDROXYI
 NDOLE-3-ACETIC ACID SULFATE"/CN)
 L11 10 SEA FILE=REGISTRY ABB=ON PLU=ON ("3,4-DIHYDROXYPHENYLACETIC
 ACID B-GLUCOSIDE"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID
 2,3-DIOXYGENASE"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID
 3,4-DIHYDROXYANILIDE"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID
 3,4-DIHYDROXYBENZYLAMIDE"/CN OR "3,4-DIHYDROXYPHENYLACETIC
 ACID 3,4-DIHYDROXYPHENETHYLAMIDE"/CN OR "3,4-DIHYDROXYPHENYLACE
 TIC ACID CYCLOHEXYLAMINE SALT"/CN OR "3,4-DIHYDROXYPHENYLACETIC
 ACID DIETHYLAMIDE"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID
 ETHYL ESTER"/CN OR "3,4-DIHYDROXYPHENYLACETIC ACID GLUCURONIDE"
 /CN OR "3,4-DIHYDROXYPHENYLACETIC ACID POLYMER"/CN)
 L12 1 SEA FILE=REGISTRY ABB=ON PLU=ON 5-HYDROXYINDOLE-3-ACETALDEHYD
 E/CN
 L13 16 SEA FILE=REGISTRY ABB=ON PLU=ON DIHYDROXYPHENYL (L) ACETALDEH
 YDE
 L14 1 SEA FILE=REGISTRY ABB=ON PLU=ON HYDROXYINDOLE (L) ACETALDEHYD
 E
 L15 6832 SEA FILE=HCAPLUS ABB=ON PLU=ON L3
 L16 684 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR L4 OR ALDH2 OR ALDH
 (W)2 OR ALCOHOL (W) DEHYDROGENASE (W) 2
 L17 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L16
 L18 9710 SEA FILE=HCAPLUS ABB=ON PLU=ON L10 OR L11 OR L12 OR L13 OR
 L14 OR (HYDROXYINDOL? OR DIHYDROXYPHENYL) (2A) (ACETIC (W)
 ACID OR ACETALDEHYDE)
 L19 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L18
 L20 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 NOT L17
 L21 33 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 (L) (ALCOHOL?)
 L22 29 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 NOT (L17 OR L20)

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L22 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:1014237 HCAPLUS

DOCUMENT NUMBER: 141:427767

TITLE: Skin compositions containing hardly-soluble components, and manufacture thereof

INVENTOR(S): Sakai, Yuji

PATENT ASSIGNEE(S): Pola Chemical Industries, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

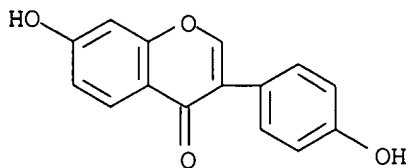
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004331593	A2	20041125	JP 2003-130921	20030509
PRIORITY APPLN. INFO.:			JP 2003-130921	20030509

AB The invention relates to a skin composition characterized by containing a hardly-soluble component, e.g. ursolic acid derivative, and an alc. compound at 1-5 times of the hardly-soluble component, wherein the use of alc. improves the storage stability and bioavailability of the hardly-soluble component. A method for manufacturing the skin composition is also disclosed. An emulsion composition was prepared from wheat germ-derived phytosterol mix. 2, cetanol 5, stigmastanol maltoside 3, δ -tocopherol 0.1, decaglycerin monostearate 5, dipropylene glycol 10, glycerin 5, phenoxyethanol 1, and water 68.9 parts.

IT **486-66-8**, Daidzein
 RL: COS (Cosmetic use); THU (Therapeutic use); BIOL (Biological study);
 USES (Uses)
 (skin compns. containing hardly-soluble components, **alcs.** and surfactants, and manufacture thereof)

RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



L22 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:955452 HCAPLUS

DOCUMENT NUMBER: 142:204673

TITLE: Composition containing natural products for reducing hangover of alcohol addiction by inhibiting alcohol dehydrogenase

INVENTOR(S): Lee, Gang Man; Lee, Hyeon Ju

PATENT ASSIGNEE(S): S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2002088243	A	20021127	KR 2001-27453	20010519
PRIORITY APPLN. INFO.:			KR 2001-27453	20010519

AB A composition containing an effective active material induced from natural products

capable of inhibiting activity of alc. dehydrogenase is provided which reduces cytotoxicity and inhibits hangover caused by consumption of alc. beverages by inhibition of the formation of aldehyde as a first metabolite in alc. metabolism thereof. The composition for reducing hangover contains as

an

effective ingredient one or more selected from Puerarin, mulberroside A, resveratrol, Rhaponticin, desoxyrhaponticin, rutin and quercetin. For an example, the Puerarin is separated from Pueraria thunbergiana (Sieb. et Zucc.) Benth., the mulberroside A is separated from Morus alba Linne, Rhaponticin and desoxyrhaponticin are separated from Rheum officinale Baillon.

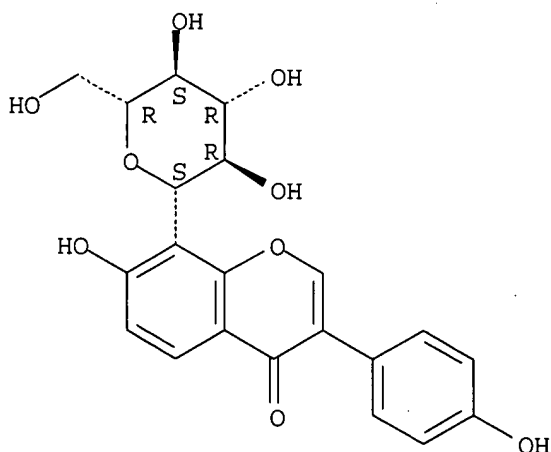
IT 3681-99-0, Puerarin

RL: NPO (Natural product occurrence); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 (pharmaceutical compns. containing natural drug products for inhibiting alc. dehydrogenase)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:630564 HCAPLUS

DOCUMENT NUMBER: 142:127245

TITLE: Effects of purified puerarin on voluntary alcohol intake and alcohol withdrawal symptoms in P rats receiving free access to water and alcohol

AUTHOR(S): Benlhabib, Elhabib; Baker, John I.; Keyler, Daniel E.; Singh, Ashok K.

CORPORATE SOURCE: Department of Veterinary Diagnostic Medicine, College

of Veterinary Medicine, University of Minnesota, St.
Paul, MN, USA

SOURCE: Journal of Medicinal Food (2004) 7(2), 180-186
CODEN: JMFOFJ; ISSN: 1096-620X

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Alc. preferring (P) rats, given "free choice" of water, exhibited daily intake of 60-75 g of water/kg of body weight. When given "free choice" of water and 15% ethanol, P rats consumed 7-13 g of alc./kg. Their water intake decreased proportionally to the alc. intake, but total fluid intake did not differ significantly. Alc. withdrawal after 50 days of alc. drinking caused withdrawal symptoms such as hypersensitivity, poor coordination, and tremors. A daily 50 mg/kg dose of puerarin (PU) caused approx. 50% suppression in alc. intake, but did not affect body weight and food and total fluid intake in P rats receiving "free choice" of water and 15% ethanol. Alc. ingestion gradually returned to the control level despite consistent PU intake. However, alc. intake following alc. withdrawal was suppressed in PU-fed P rats. PU suppressed the severity of alc. withdrawal symptoms. Thus, withdrawal symptoms do not occur in PU-fed rats even though their alc. ingestion is comparable to that in control P rats. Brain, plasma, and liver samples were analyzed for the presence of kudzu root isoflavones, which are mostly PU (>90% of total isoflavones) and a trace amount of daidzin. Liver samples obtained from PU-fed P rats contained 20-30 µg/g of PU. An important observation was that plasma or brain samples obtained from PU-fed or alc. + PU-fed rats did not contain PU. This study indicated that PU feeding transiently suppressed alc. intake and abolished withdrawal symptoms at a time when alc. intake had returned to the control level. The absence of PU in plasma and brain indicates the possibility that some nonspecific mechanism may be involved in the anti-alcoholism effects of PU in P rats.

IT 3681-99-0, Puerarin

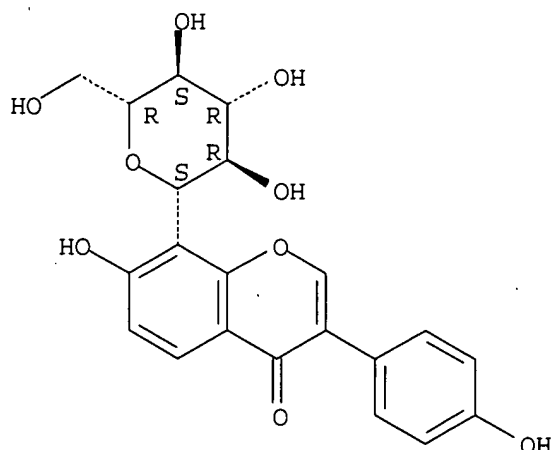
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(puerarin transiently suppressed alc. intake, abolished withdrawal symptoms without entering brain or plasma, demonstrating anti-alcoholism effect in alc. preferring (P) rat receiving free access to water and alc.)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:630563 HCAPLUS

DOCUMENT NUMBER: 142:127244

TITLE: Kudzu root extract suppresses voluntary alcohol intake and alcohol withdrawal symptoms in P rats receiving free access to water and alcohol

AUTHOR(S): Benlhabib, Elhabib; Baker, John I.; Keyler, Daniel E.; Singh, Ashok K.

CORPORATE SOURCE: Department of Veterinary Diagnostic Medicine, College of Veterinary Medicine, University of Minnesota, St. Paul, MN, USA

SOURCE: Journal of Medicinal Food (2004), 7(2), 168-179
CODEN: JMFOFJ; ISSN: 1096-620X

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Alc.-preferring (P) rats, given free choice to drink water or 15% alc., drank 7-10 g of alc./kg/day, giving blood alc. values ranging from 16 to 24 mg/dL. Body weight and food and total fluid intake values in control and alc.-drinking P rats did not differ significantly, while water intake was inversely related to the amount of alc. consumed. Alc. withdrawal after 50 days of alc. drinking caused withdrawal symptoms such as hypersensitivity, poor landing coordination, and tremors. A daily 0.5, 0.75, and 1.0 g/kg dose of kudzu root (KdR) did not affect body weight and food and water intake values in control (no alc.) P rats. Subchronic feeding of relatively higher KdR doses (0.75 and 1.0 g/kg) caused a 25-30% reduction in weight gain. The 0.5 g/kg KdR dose caused a 50-60% reduction in alc. consumption, abolished the development of alc. withdrawal symptoms, but did not affect blood alc. levels. The higher KdR doses did not further reduce alc. consumption. Alc. suppressed the weight-reducing effects of KdR. The KdR extract used in this study contained 150 mg/g of puerarin, 13 mg/g of daidzin, 4 mg/g of daidzein, 3 mg/g of genistin, 0.2 mg/g of genistein, and 1 mg/g of glycyetin. Blood and liver samples contained mostly puerarin and a trace amount of daidzein that may have been formed by the hydrolysis of daidzin by liver enzymes. An important observation was that brain samples obtained from KdR-fed or alc. + KdR-fed rats did not contain any of the KdR isoflavones. Thus, KdR isoflavones suppressed alc. drinking and

withdrawal symptoms without entering the brain.

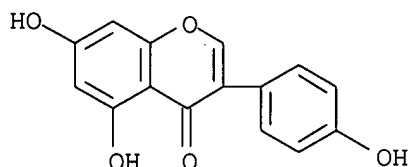
IT 446-72-0, Genistein

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KdR extract containing small amount of genistein, suppressed alc. intake, withdrawal symptoms without entering brain, but blood, liver samples contained puerarin and daidzein in P rat receiving free access to water and alc.)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



IT 529-59-9, Genistin

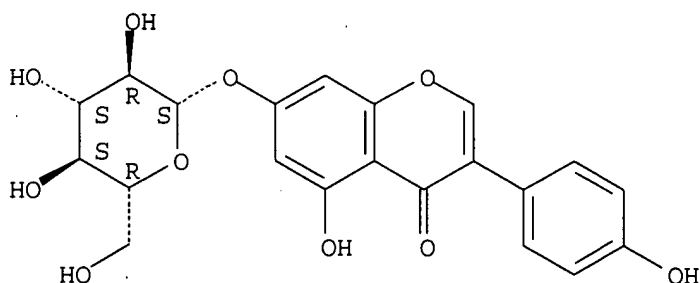
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KdR extract containing small amount of genistin, suppressed alc. intake, withdrawal symptoms without entering brain, but blood, liver samples contained puerarin and daidzein in P rat receiving free access to water and alc.)

RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



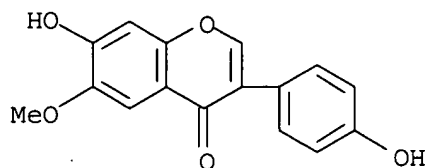
IT 40957-83-3, Glycetein

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KdR extract containing small amount of glycetein, suppressed alc. intake, withdrawal symptoms without entering brain, but blood, liver samples contained puerarin and daidzein in P rat receiving free access to water and alc.)

RN 40957-83-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)



IT 3681-99-0, Puerarin

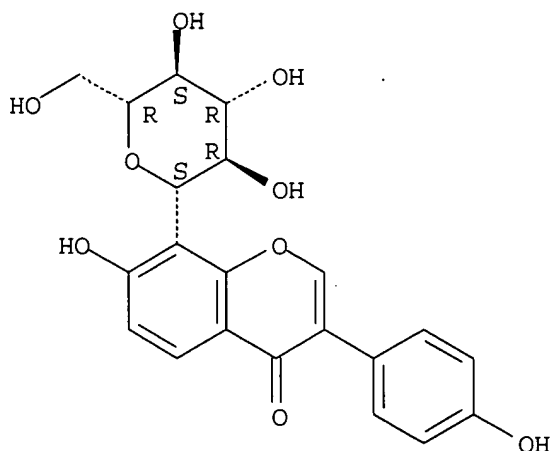
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KdR extract suppressed **alc.** intake, withdrawal symptoms without entering brain, but blood and liver samples contained isoflavones puerarin and trace amount of daidzein in P rat receiving free access to water and **alc.**)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



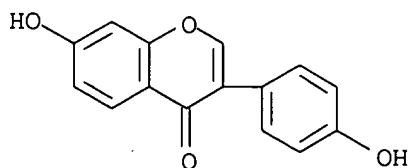
IT 486-66-8, Daidzein 552-66-9, Daidzin

RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(KdR extract suppressed **alc.** intake, withdrawal symptoms without entering brain, but blood and liver samples contained trace amount of isoflavone daidzein formed by hydrolysis of daidzin in P rat receiving free access to water and **alc.**)

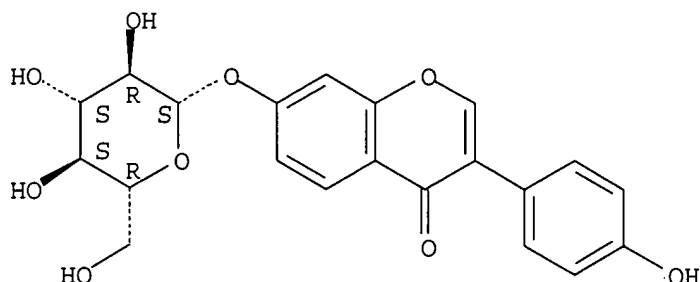
RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:499545 HCAPLUS

DOCUMENT NUMBER: 142:88375

TITLE: Protein binding of isoflavones and enantiomers of perillyl alcohol to HSA studied using high-performance frontal analysis

AUTHOR(S): Song, Myong-Seok; Row, Kyung Ho

CORPORATE SOURCE: Center for Advanced Bioseparation Technology and Dept. of Chem Eng., Inha University, Nam-Ku, Incheon, 402-751, S. Korea

SOURCE: Kongop Hwahak (2004), 15(3), 334-340

CODEN: KOHWE9; ISSN: 1225-0112

PUBLISHER: Korean Society of Industrial and Engineering Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: Korean

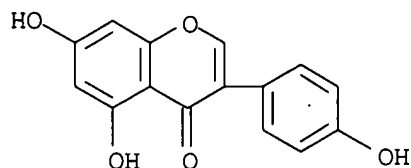
AB High-performance frontal anal. (HPFA) was used for protein binding study of isoflavones (daidzein, genistin, and genistein) and enantiomers of perillyl alc. (S-POH, R-POH) to human serum albumin (HSA). The anal. was performed on a Develosil 100-Diol-5 (10 cm 4.6 mm I.D.) column. Sodium phosphate solution (pH 7.4, ionic strength 0.17) was used as the mobile phase at a flow rate of 1 mL/min. UV wavelength was set at 260 nm. To ensure the drug to be eluted as a trapezoidal peak with a plateau, injection vols. of 700 μ L for daidzein and genistin, 900 μ L for genistein were chosen, resp. Exptl. data were fitted by Scatchard anal. For isoflavones, the binding constant (K) and binding affinity (nK) to HSA were: K = 1.581105 (L/mol), nK = 0.77104 (L/mol) for daidzein; K = 1.082105 (L/mol), nK = 0.32104 (L/mol) for genistein; and K = 3.533105 (L/mol), nK = 0.70104 (L/mol) for genistin, resp. For enantiomers of perillyl alc., the binding constant (K) and binding affinity (nK) to HSA were: K = 5.20106 (L/mol), nK = 1.74104 (L/mol) for S-POH and K = 3.71106 (L/mol), nK = 1.51104 (L/mol) for R-POH, resp.

IT 446-72-0, Genistein 486-66-8, Daidzein 529-59-9, Genistin

RL: BSU (Biological study, unclassified); BIOL (Biological study) (high-performance frontal anal. study of binding of isoflavones and enantiomers of perillyl alc. to human serum albumin)

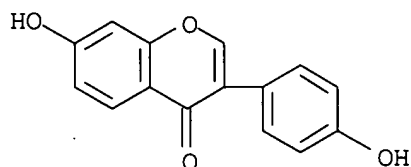
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

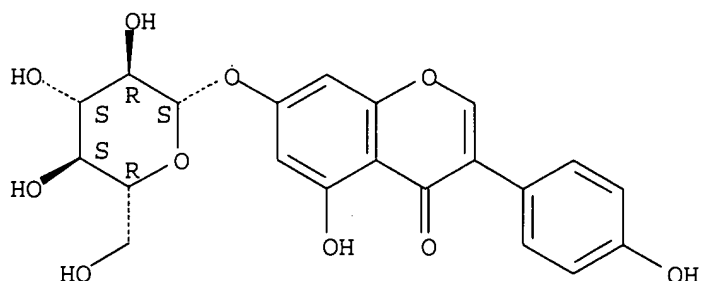
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:704343 HCAPLUS

DOCUMENT NUMBER: 140:87384

TITLE: Anthracycline secondary alcohol metabolite formation in human or rabbit heart: biochemical aspects and pharmacologic implications

AUTHOR(S): Mordente, Alvaro; Minotti, Giorgio; Martorana, Giuseppe Ettore; Silvestrini, Andrea; Giardina, Bruno; Meucci, Elisabetta

CORPORATE SOURCE: Institute of Biochemistry and Clinical Biochemistry, Catholic University School of Medicine, Rome, 00168, Italy

SOURCE: Biochemical Pharmacology (2003), 66(6), 989-998

CODEN: BCPCA6; ISSN: 0006-2952

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Clin. use of the anticancer anthracyclines doxorubicin (DOX) and daunorubicin (DNR) is limited by development of cardiotoxicity upon chronic administration. Secondary alc. metabolites, formed after two-equivalent reduction of a carbonyl group in the side chain of DOX or DNR, have

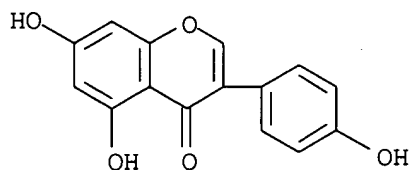
been implicated as potential mediators of chronic cardiotoxicity. In the present study we characterized how human heart converted DOX or DNR to their alc. metabolites DOXol or DNRol. Expts. were carried out using post-mortem myocardial samples obtained by ethically-acceptable procedures, and results showed that DOXol and DNRol were formed by flavin-independent cytoplasmic reductases which shared common features like pH-dependence and requirement for NADPH, but not NADH, as a source of reducing equivalent. However, studies performed with inhibitors exhibiting absolute or mixed specificity toward best known cytoplasmic reductases revealed that DOX and DNR were metabolized to DOXol or DNRol through the action of distinct enzymes. Whereas DOX was converted to DOXol by aldehyde-type reductase(s) belonging to the superfamily of aldo-keto reductases, DNR was converted to DNRol by carbonyl reductase(s) belonging to the superfamily of short-chain dehydrogenase/reductases. This pattern changed in cardiac cytosol derived from rabbit, a laboratory animal often exploited to reproduce cardiotoxicity induced by anthracyclines and to develop protectants for use in cancer patients. In fact, only carbonyl reductases were involved in metabolizing DOX and DNR in rabbit cardiac cytosol, although with different K_m and V_{max} . Collectively, these results demonstrate that human myocardium convert DOX and DNR to DOXol or DNRol by virtue of different reductases, an information which may be of value to prevent alc. metabolite formation during the course of anthracycline-based anticancer therapy. These results also raise caution on the preclin. value of animal models of anthracycline cardiotoxicity, as they demonstrate that the metabolic routes leading to DOXol in a laboratory animal may not be the same as those occurring in patients.

IT 446-72-0, Genistein

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (anthracycline secondary alc. metabolite formation in human or rabbit heart)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:581225 HCAPLUS

DOCUMENT NUMBER: 140:53232

TITLE: NPI-031G (puerarin) reduces anxiogenic effects of alcohol withdrawal or benzodiazepine inverse or 5-HT2C

agonists
 AUTHOR(S): Overstreet, David H.; Kralic, Jason E.; Morrow, A.
 Leslie; Ma, Zhong Z.; Zhang, Y. W.; Lee, David Y. W.
 CORPORATE SOURCE: Skipper Bowles Center for Alcohol Studies, University
 of North Carolina School of Medicine, Chapel Hill, NC,
 27599-7178, USA
 SOURCE: Pharmacology, Biochemistry and Behavior (2003), 75(3),
 619-625
 CODEN: PBBHAU; ISSN: 0091-3057
 PUBLISHER: Elsevier Science Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Because exts. of kudzu have been used as a hangover remedy in China for many centuries, we tested the ability of NPI-031G (puerarin), an isoflavone isolated from kudzu, to counteract anxiogenic effects associated with withdrawal from chronic alc. exposure. NPI-031G (50 and 150 mg/kg i.p.) significantly increased the social interaction and locomotor activity reduced by withdrawal from 17 days of alc. (7%) diet. The effects of NPI-031G resembled those of the benzodiazepine antagonist, flumazenil (5 mg/kg), and the 5-HT_{2C} antagonist, SB 242084 (1 mg/kg). In a sep. study, control rats were pretreated with NPI-031G (30 min) and then given the anxiogenic compds. DMCM, a benzodiazepine inverse agonist, or Ro 60 0175, a 5-HT_{2C} agonist. NPI-031G significantly counteracted the reduction in social interaction induced by either compound. To identify a potential mechanism of action of NPI-031G, synaptoneurosomes were isolated from the cerebral cortex of untreated rats and chloride uptake assays were carried out. NPI-031G did not have any effect on the stimulation of chloride uptake by muscimol, a GABA(A) agonist. However, it reduced the potentiation of muscimol-stimulated chloride uptake by flunitrazepam, a benzodiazepine agonist, at a concentration of 100 μ M. A reduction in [3H]flunitrazepam binding was also seen at this concentration. These findings

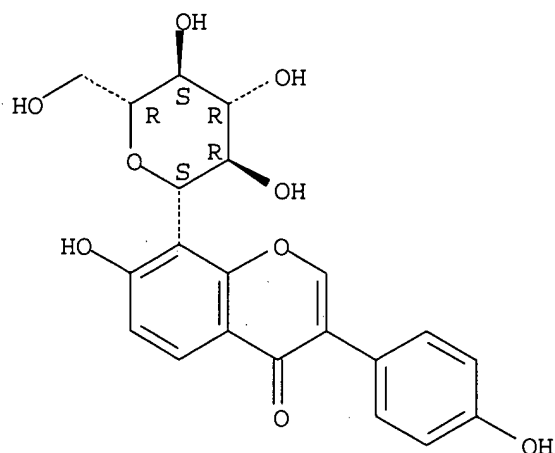
are consistent with NPI-031G being a weak benzodiazepine site antagonist.

IT 3681-99-0, Puerarin
 RL: DMA (Drug mechanism of action); NPO (Natural product occurrence); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 (NPI-031G reduces anxiogenic effects of alc. withdrawal or benzodiazepine inverse or 5-HT_{2C} agonists)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:404035 HCAPLUS

DOCUMENT NUMBER: 139:391156

TITLE: Study on effects of puerarin against memory impairment in mice induced by chronic alcoholism

AUTHOR(S): Xu, Xiaohong

CORPORATE SOURCE: College of Life and Environment Science, Zhejiang Normal University, Jinhua, 321004, Peop. Rep. China

SOURCE: Zhongguo Yaoxue Zazhi (Beijing, China) (2003), 38(1), 31-34

CODEN: ZYZAEU; ISSN: 1001-2494

PUBLISHER: Zhongguo Yaoxue Zazhishe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The improvement effects of puerarin (Pue) on impairment of learning-memory in mice induced by long-term administration of alc. were studied and its possible mechanism of action was analyzed. Chronic alcoholism was induced in mice by long-term i.g. administration of alc. for 4 wk. Meanwhile, the mice were treated with Pue, 20 or 100 mg kg⁻¹ once daily for 4 wk. After the last treatment, learning-memory behavior was tested using Y-maze. Then the activity of superoxide dismutase (SOD) and the content of lipofuscin were measured by spectrophotometry and fluorospectrophotometer, resp. The synaptic interface structure of Gray I in CA3 area of hippocampus was quant. analyzed by electronic microscope and computer image processing appliance. Long-term administration of alc. caused impairment of learning-memory in mice, SOD activity declined, and the level of lipofuscin increased. It was found that Pue 100 mg kg⁻¹ remarkably improved learning-memory ability of the mice, promoted the activity of SOD, decreased the content of lipofuscin, increased significantly the thickness of post-synaptic d. (PSD), and shortened the width of the synaptic cleft in hippocampus CA3 area. Pue showed an improvement effect against the memory impairment in mice induced by long-term administration of alc. Improvement of the antioxidase activity in brain and an alteration of synaptic interface structure of hippocampus might be related.

IT 3681-99-0, Puerarin

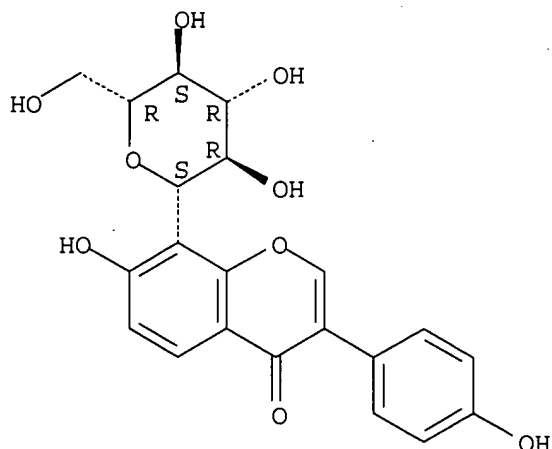
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)
 (effects of puerarin against memory impairment in mice induced by
 chronic **alcoholism**)

RN 3681-99-0 HCAPLUS.

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:355825 HCAPLUS

DOCUMENT NUMBER: 138:348732

TITLE: Compositions and methods for increasing compliance
 with therapies using aldehyde dehydrogenase inhibitors
 in the treatment of alcoholism

INVENTOR(S): Lederman, Seth

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003087814	A1	20030508	US 2002-287153	20021104
CA 2463987	AA	20030515	CA 2002-2463987	20021104
WO 2003039525	A1	20030515	WO 2002-US35376	20021104
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

EP 1441708 A1 20040804 EP 2002-789421 20021104

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SKPRIORITY APPLN. INFO.: US 2001-338901P P 20011105
WO 2002-US35376 W 20021104AB Compns. and methods for the treatment, prevention, or reducing alcoholism,
in particular methods for increasing patient compliance with therapies
that require the intake of an ALDH inhibitor comprising the step of
administering a monoamine oxidase B inhibitor.

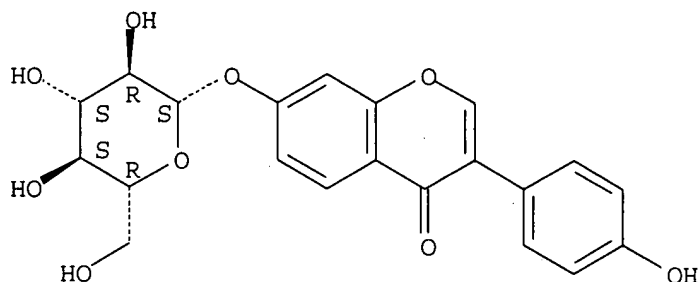
IT 552-66-9, Daidzin

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)(compns. and methods for increasing compliance with therapies using
aldehyde dehydrogenase inhibitors in treatment of **alcoholism**)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L22 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:763445 HCAPLUS

DOCUMENT NUMBER: 138:331001

TITLE: Preclinical studies of kudzu (*Pueraria lobata*) as a
treatment for alcohol abuse

AUTHOR(S): Keung, Wing Ming

CORPORATE SOURCE: Center for Biochemical and Biophysical Sciences and
Medicine, Harvard Medical School, Boston, MA, 02115,
USASOURCE: Medicinal and Aromatic Plants--Industrial Profiles
(2002), 23(Pueraria), 144-158

CODEN: MAPPFL; ISSN: 1027-4502

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The author to briefly discuss the conventional pharmaceuticals
currently used for the treatment of alc. abuse/alcoholism and provide a
detail account on the discovery of and recent progress on the pharmacol.
and biochem. studies of the antidipsotropic action of *Radix puerariae* and
its active principles.

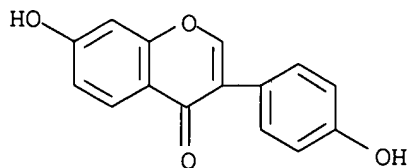
IT 486-66-8, Daidzein 552-66-9, Daidzin

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)(preclin. studies of kudzu as treatment for **alc. abuse**)

RN 486-66-8 HCAPLUS

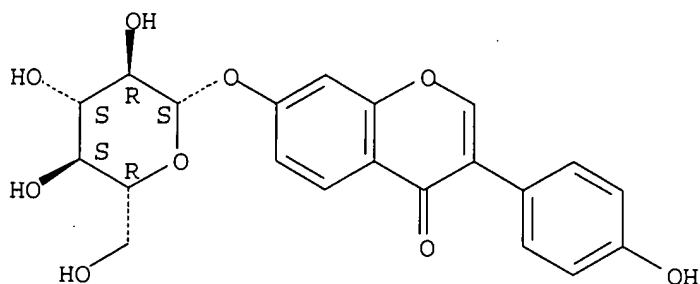
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX

NAME)



RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:212149 HCAPLUS

DOCUMENT NUMBER: 137:288926

TITLE: Studies on the screening of a bioactive compound
 acting on intracellular enzymes from natural products
 and its mode of action: inhibitory component of
 Puerariae Radix on alcohol dehydrogenase activity
 AUTHOR(S): Lee, Hyun Joo; Oh, Min Ah; Choi, Young Hui; Lee, Kang
 Man

CORPORATE SOURCE: The Research Institute of Pharmaceutical Sciences and
 College of Pharmacy, Ewha Womans University, Seoul,
 120-750, S. Korea

SOURCE: Yakhak Hoechi (2001), 45(5), 500-505
 CODEN: YAHOA3; ISSN: 0513-4234

PUBLISHER: Pharmaceutical Society of Korea

DOCUMENT TYPE: Journal

LANGUAGE: Korean

AB Puerariae Radix is one of the medicinal plants used in oriental medicine
 for hangover. It has been claimed for several pharmacol. effects
 including anti-alc. abuse, antidipsotropic activity and anti-alc.
 intoxication. In connection with Puerariae Radix effects, and
 activity-guided purification of active substance on alc. dehydrogenase (ADH)
 was carried out. The most active compound was isolated as puerarin
 (C21H20O9), mol. weight 416. Puerarin inhibited ADH noncompetitively against
 ethanol or NAD+.

IT 3681-99-0, Puerarin

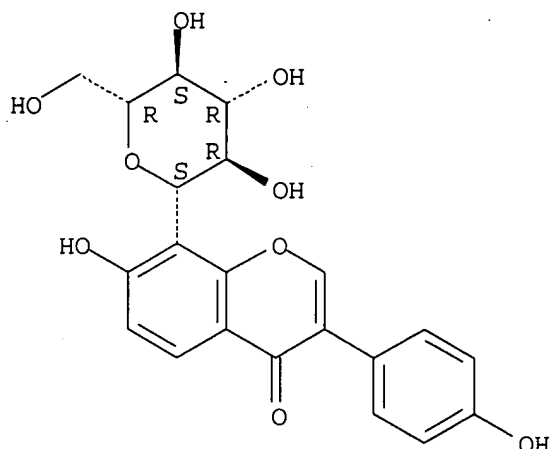
RL: NPO (Natural product occurrence); PAC (Pharmacological activity); BIOL

(Biological study); OCCU (Occurrence)
 (Puerariae radix extract inhibitory effect on alc. dehydrogenase activity)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:885751 HCAPLUS

DOCUMENT NUMBER: 136:1825

TITLE: Method for treating alcohol intoxication and alcohol abuse

INVENTOR(S): Lukas, Scott; Lee, David Yue-We

PATENT ASSIGNEE(S): The Mclean Hospital Corporation, USA

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091746	A1	20011206	WO 2001-US17811	20010531
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002022634	A1	20020221	US 2001-871760	20010531
US 6465436	B2	20021015		

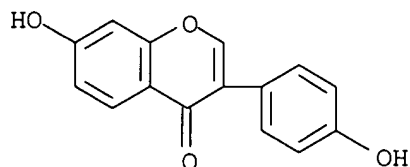
PRIORITY APPLN. INFO.: US 2000-208618P P 20000601

AB Treatment for alc. dependence or intoxication that involves administering a pharmaceutical composition containing an extract of the kudzu plant, Pueraria

lobata.

IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
, PuerarinRL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method for treating **alc.** intoxication and **alc.**
abuse)

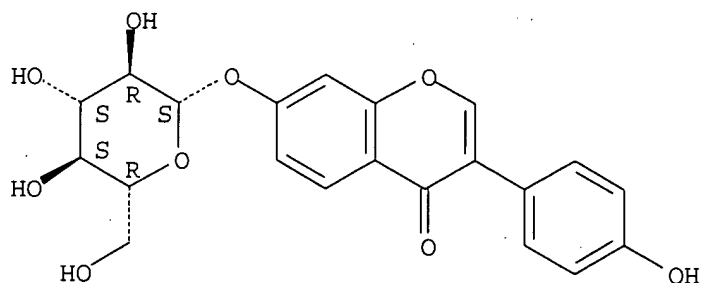
RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
NAME)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

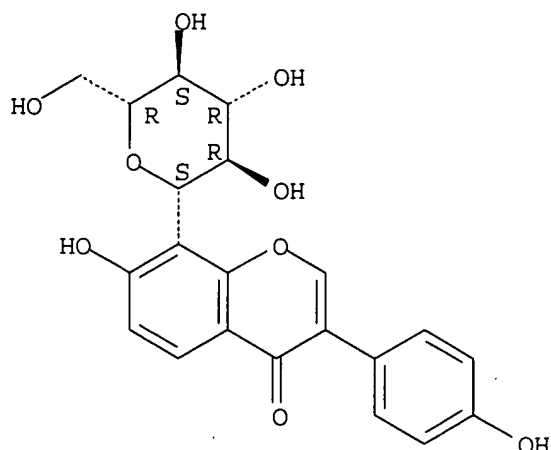
Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-
hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:829320 HCAPLUS

DOCUMENT NUMBER: 136:65544

TITLE: Acute Alcohol-induced Protection against Infarction in Rabbit Hearts: Differences from and Similarities to Ischemic Preconditioning

AUTHOR(S): Krenz, Maike; Baines, Christopher P.; Heusch, Gerd; Downey, James M.; Cohen, Michael V.

CORPORATE SOURCE: Department of Physiology, University of South Alabama, Mobile, AL, USA

SOURCE: Journal of Molecular and Cellular Cardiology (2001), 33(11), 2015-2022

CODEN: JMCDAJ; ISSN: 0022-2828

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Recent studies reveal that brief ethanol exposure induces cardioprotection against simulated ischemia in cardiomyocytes by the activation of protein kinase C- ϵ . The present study tests the ability of ethanol to induce protection in rabbit hearts in which infarct size was the end-point and explores the signal transduction pathways involved. In isolated rabbit hearts, 50 mM ethanol infused for 5 min with 10 min of washout prior to 30 min of regional ischemia reduced infarct size (triphenyltetrazolium chloride staining) by 49%. Neither adenosine receptor blockade with 8-(p-sulphophenyl) theophylline nor the free radical scavenger N-2-mercaptopropionyl glycine inhibited the protection triggered by ethanol. In contrast, protein kinase C inhibition with chelerythrine, protein tyrosine kinase inhibition with genistein, and blockade of ATP-sensitive potassium channels (KATP) with either 5-hydroxydecanoate or glibenclamide did abolish protection. Thus, transient ethanol exposure followed by washout prior to ischemia elicits a preconditioning-like effect involving protein kinase C, at least one protein tyrosine kinase, and KATP channels, but neither adenosine nor free radicals. (c) 2001 Academic Press.

IT 446-72-0, Genistein

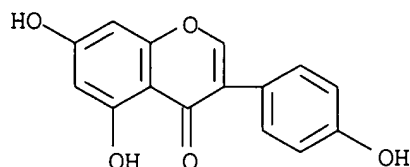
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified);

ANST (Analytical study); BIOL (Biological study); USES (Uses)

(alc.-induced protection against infarction in rabbit hearts and differences from and similarities to ischemic preconditioning in relation to free radicals and oxidative stress)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:171062 HCAPLUS

DOCUMENT NUMBER: 133:42718

TITLE: Serum and urinary isoflavonoids and their metabolites in elderly men on diets supplemented with beverages containing untreated and alcohol-extracted soy protein
AUTHOR(S): Smith, M.; Kirk, M.; Weiss, H.; Irwin, W.; Markiewicz, M. A.; Urban, D.; Grizzle, W. E.; Barnes, S.

CORPORATE SOURCE: Departments of Pathology, Pharmacology and Toxicology, University of Alabama, Birmingham, AL, USA

SOURCE: Journal of Medicinal Food (1999), 2(3-4), 219-222
CODEN: JMFOFJ; ISSN: 1096-620X

PUBLISHER: Mary Ann Liebert, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Elderly male patients with blood serum prostate-specific antigen (PSA) values of ≥ 4 ng/mL were randomly assigned to 1 of 2 isolated soy protein (ISP) beverages; 1 of the soy beverages contained a normal complement of isoflavones (ISP+), the other (ISP-) was extensively depleted ($> 95\%$) of genistein (GEN) and daidzein (DZN) by alc. extraction. At the end of a 6-wk period of consumption, each subject was switched to the other beverage for a further 6-wk period. ISP+ taken either in the 1st or 2nd 6-wk period caused a 25- to 30-fold increase in serum and urine concns.; ISP- also increased serum and urine concns. (3-fold), compared with the control period. GEN was retained in the blood to a greater extent than DZN and its metabolites dihydrodaidzein (DHD) and o-desmethylangolensin (o-DMA). The urinary excretion of DHD was the most rapid of all forms. The urinary clearance rate of GEN was 2-6 + lower than that of DZN, DHD, and o-DMA and similar to that of equol.

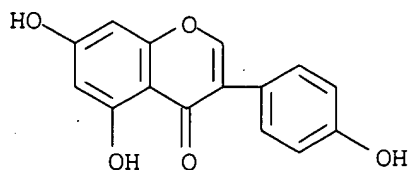
IT 446-72-0, Genistein 486-66-8, Daidzein

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

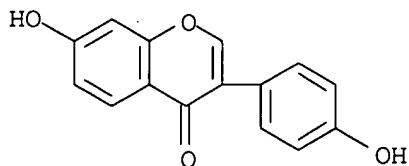
(serum and urinary isoflavonoids and their metabolites in elderly men on diets supplemented with beverages containing untreated and alc.-extracted soy protein)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:378134 HCAPLUS

DOCUMENT NUMBER: 131:72953

TITLE: Manufacture of aglycon isoflavone-enriched plant protein whey, whey proteins, aglycon isoflavones, genistein-rich substances, daidzein-rich substances, and their manufacture from plant protein whey

INVENTOR(S): Shen, Jerome; Roussey, Mark A.; Bryan, Barbara A.; Allred, Maryann C.

PATENT ASSIGNEE(S): Proteine Technologies International Inc., USA

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11155592	A2	19990615	JP 1997-300299	19971031
US_5827682	A	19981027	US 1996-730171	19961015
			US 1996-730171	A 19961015
			US 1995-477102	B2 19950607

PRIORITY APPLN. INFO.: US 1996-730171 A 19961015
 US 1995-477102 B2 19950607

AB The process, for manufacture of aglycon isoflavone-enriched whey, involves (1) treating plant protein whey containing isoflavone complexes at a certain temperature

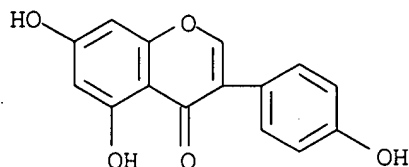
and pH for a long enough time to convert the isoflavone complexes into isoflavone glycosides and (2) treating the isoflavone glycosides in the whey with enzymes at a certain temperature and pH for a long enough time to convert most of the glycosides into aglycon isoflavones. The whey and substances with high contents of aglycon isoflavones, e.g. genistein and daidzein from soybean, are useful for health foods.

IT 446-72-0P, Genistein 486-66-8P, Daidzein
 40957-83-3P, Glycitein

RL: BMF (Bioindustrial manufacture); FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (manufacture of aglycon isoflavone-enriched plant (e.g. soybean) protein whey with enzymes and optional **alc.** extraction and adsorption for health food)

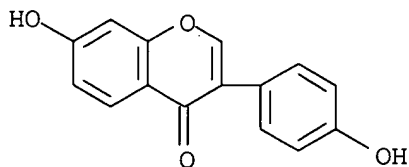
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



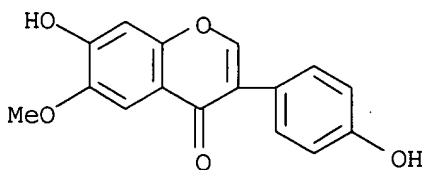
RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 40957-83-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)



IT 529-59-9P, Genistin 552-66-9P, Daidzin

40246-10-4P, Glycitin

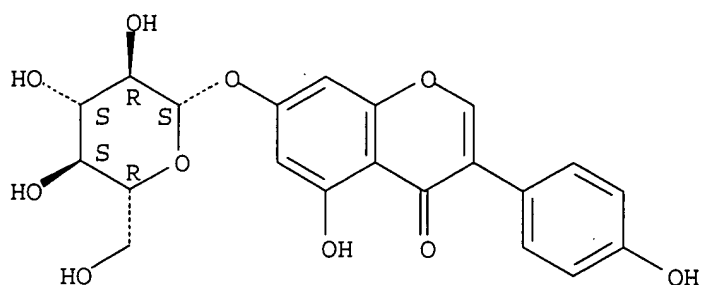
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(manufacture of aglycon isoflavone-enriched plant (e.g. soybean) protein whey with enzymes and optional **alc.** extraction and adsorption for health food)

RN 529-59-9 HCAPLUS

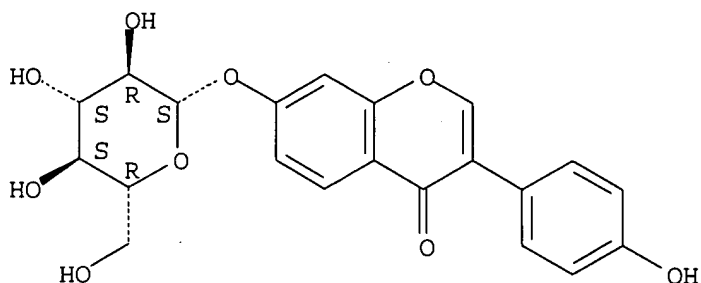
CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



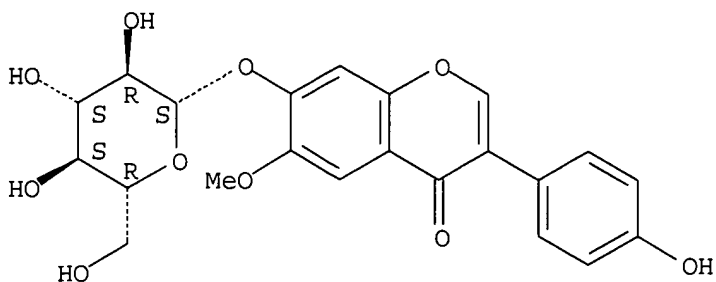
RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 40246-10-4 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 6-methoxy- (9CI) (CA INDEX NAME)

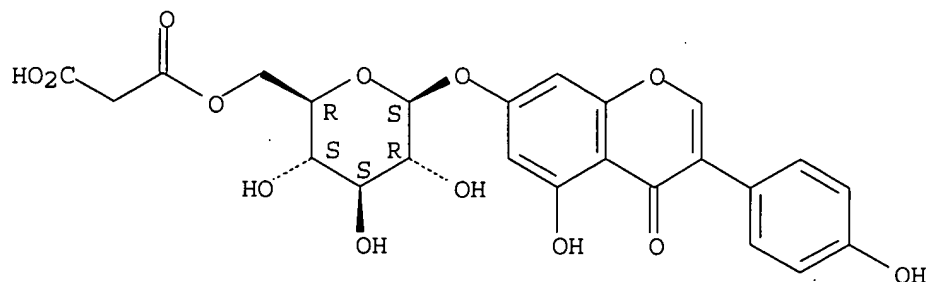
Absolute stereochemistry.



IT 51011-05-3, 6''-O-Malonylgenistin 71385-83-6
 73566-30-0 124590-31-4, 6''-O-Malonyldaidzin
 137705-39-6, 6''-O-Malonylglycitin
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manufacture of aglycon isoflavone-enriched plant (e.g. soybean) protein
 whey with enzymes and optional alc. extraction and adsorption for
 health food)

RN 51011-05-3 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-
 glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

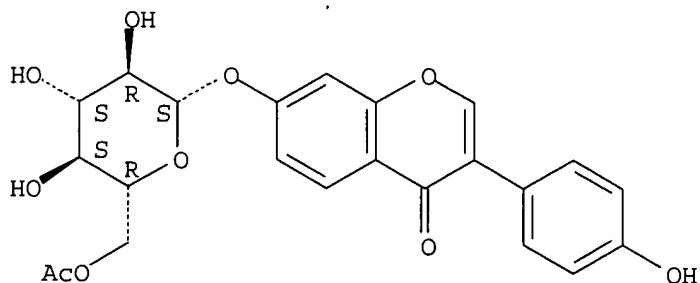
Absolute stereochemistry.



RN 71385-83-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-O-acetyl-beta-D-glucopyranosyl)oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

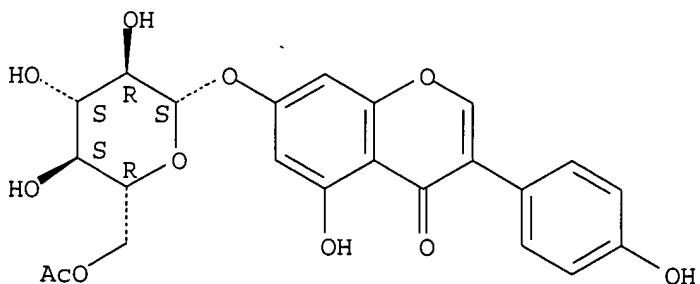
Absolute stereochemistry.



RN 73566-30-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[(6-O-acetyl-beta-D-glucopyranosyl)oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

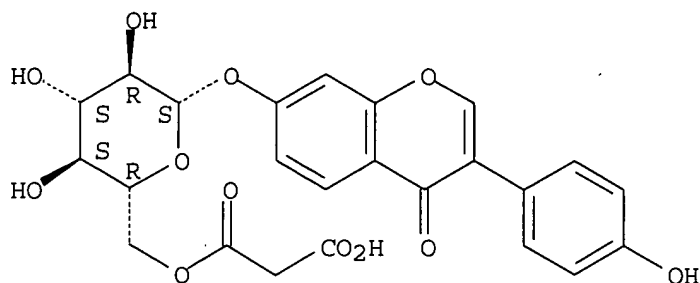
Absolute stereochemistry.



RN 124590-31-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-beta-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

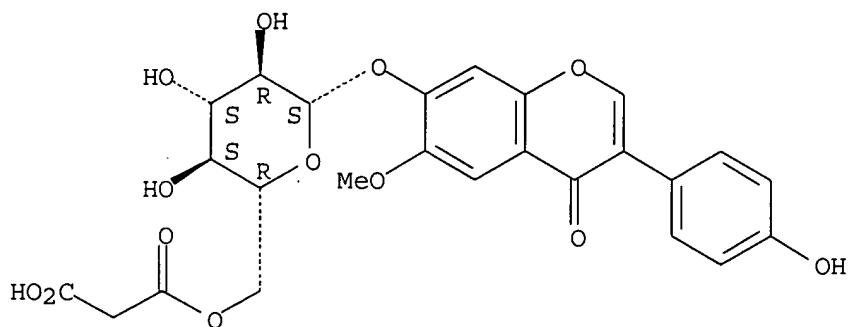
Absolute stereochemistry. Rotation (-).



RN 137705-39-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:789683 HCAPLUS

DOCUMENT NUMBER: 130:148107

TITLE: Effects of isoflavones on alcohol pharmacokinetics and alcohol-drinking behavior in rats

AUTHOR(S): Lin, Renee C.; Li, Ting-Kai

CORPORATE SOURCE: Departments of Medicine and Biochemistry/Molecular Biology, Veterans Affairs Medical Center, Indiana University School of Medicine, Indianapolis, IN, USA

SOURCE: American Journal of Clinical Nutrition (1998), 68(6, Suppl.), 1512S-1515S

CODEN: AJCNAC; ISSN: 0002-9165

PUBLISHER: American Society for Clinical Nutrition

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review, with 10 refs. Puerarin, daidzin, and daidzein are 3 major isoflavonoid compds. isolated from *Pueraria lobata*, an edible vine used widely in China for various medicinal purposes. We studied the antiinebriation and the antidipsotropic effects of these antioxidants in rats. Daidzin and daidzein shortened alc.-induced sleep time (loss of righting reflex) in rats that were given ethanol intragastrically but not in those given ethanol i.p. When daidzin was given to animals intragastrically with the ethanol solution, the blood alc. concentration (BAC)

was

found to peak later and be lower than in control rats that were given only the ethanol solution BACs also receded more slowly if daidzin was fed to the

animals. None of the 3 isoflavonoid compds. administered orally affected liver alc. dehydrogenase or aldehyde dehydrogenase activities, as was reported for i.p. administration. Further expts. indicated that the suppression of the BAC by daidzin was due mainly to delay of stomach emptying. All 3 compds. suppressed voluntary alc. consumption in alc.-preferring rats. The decrease in alc. consumption was accompanied by an increase in water intake, so that the total volume of liquid consumed daily remained unchanged. Daily food consumption and body weight gain were not affected. Alc. preference returned to baseline levels after the isoflavonoids were discontinued. We postulate that the suppression of alc. reinforcement produced by these compds. is mediated centrally in the brain reward pathway.

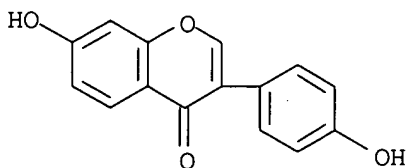
IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
, Puerarin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(effects of isoflavones on alc. pharmacokinetics and
alc.-drinking behavior in rats)

RN 486-66-8 HCAPLUS

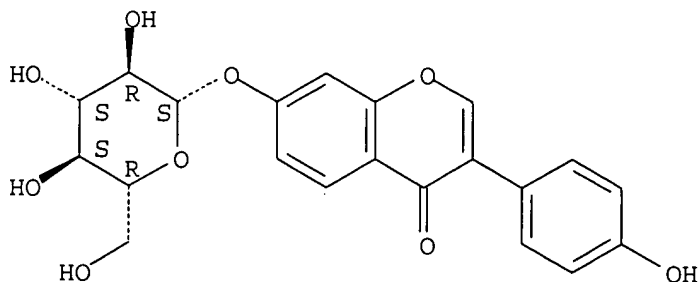
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

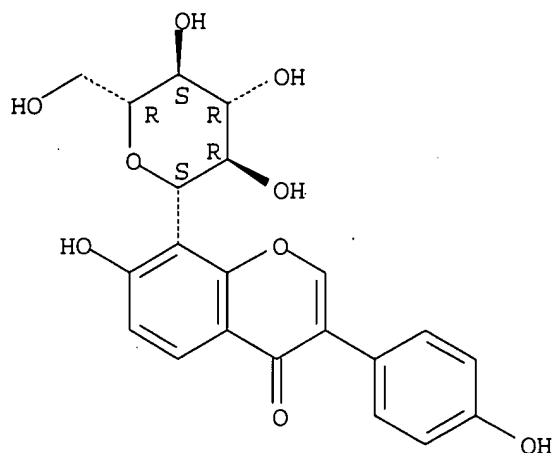
Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:735082 HCAPLUS

DOCUMENT NUMBER: 130:1279

TITLE: Safe pharmaceutical composition for treating and preventing alcohol abuse and increasing immune function

INVENTOR(S): Liu, Yaguang

PATENT ASSIGNEE(S): USA

SOURCE: U.S., 5 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5834605	A	19981110	US 1997-888536	19970707
PRIORITY APPLN. INFO.:			US 1997-888536	19970707

AB The safe pharmaceutical composition and processed are provided for treating and preventing alc. abuse and increasing immune function. The pharmaceutical composition is composed of puerarin derivs., which includes puerarin, daidzein or Genistia.

IT 529-59-9P, Genistin 552-66-9P, Daidzin
3681-99-0DP, Puerarin, derivs.

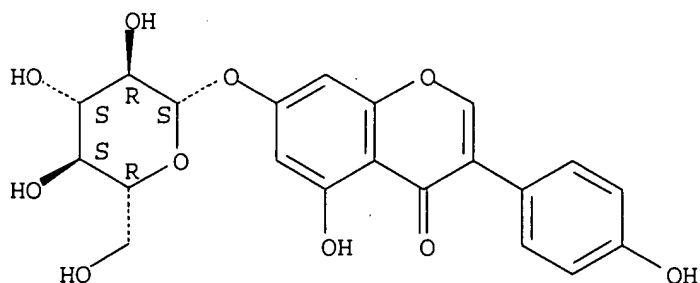
RL: ANT (Analyte); PUR (Purification or recovery); THU (Therapeutic use);
ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(pharmaceutical composition for treating and preventing alc. abuse and increasing immune function)

RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

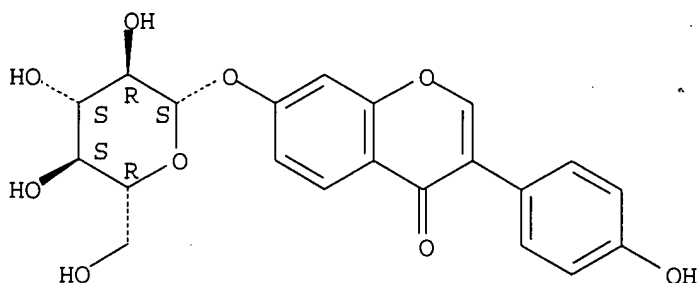
Absolute stereochemistry.



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

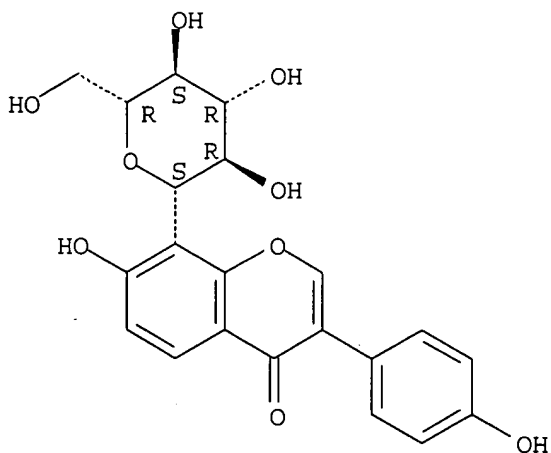
Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 3681-99-0, Puerarin

RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); USES (Uses)

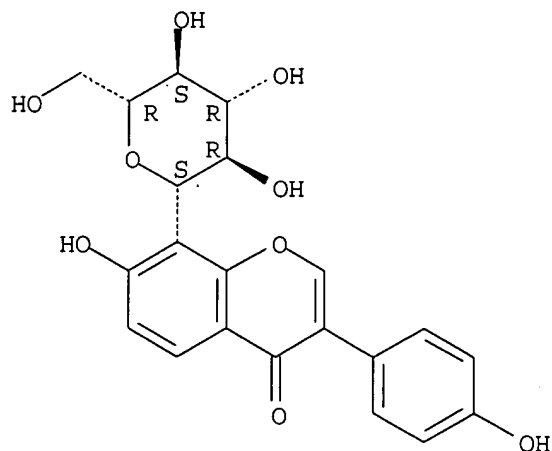
(pharmaceutical composition for treating and preventing alc. abuse

and increasing immune function)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:493165 HCAPLUS

DOCUMENT NUMBER: 129:157914

TITLE: Method for treating alcohol dependence

INVENTOR(S): Pei, Yue-Hu; Overstreet, David; Rezvani, Amir Hosein; Lee, David Yue-Wei

PATENT ASSIGNEE(S): Natural Pharmacia International, Inc., USA

SOURCE: U.S., 15 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>US 5783189</u>	A	19980721	US 1996-636347	19960423
PRIORITY APPLN. INFO.:			US 1996-636347	19960423

OTHER SOURCE(S): MARPAT 129:157914

AB Isoflavonoids containing a carbon-carbon linked β -D-glucose moiety at the C-8 position and isolated from the Chinese herbal plant *Pueraria lobata* are useful for treating alc. dependence.

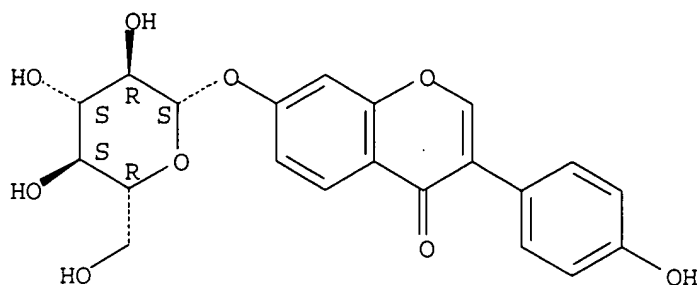
IT **552-66-9P**, NPI 031D

RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NPI 031D; isoflavonoids of *Pueraria lobata* for treating alc. dependence)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

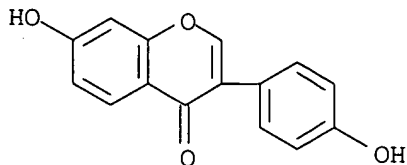


IT 486-66-8P, NPI 031E

RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NPI 031E; isoflavonoids of Pueraria lobata for treating **alc.** dependence)

RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



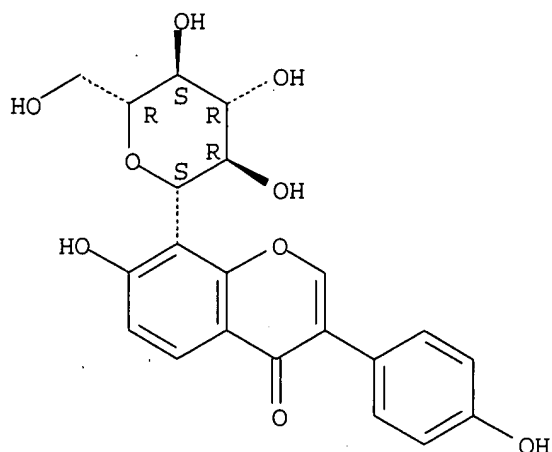
IT 3681-99-0P, NPI 031G

RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(NPI 031G; isoflavonoids of Pueraria lobata for treating **alc.** dependence)

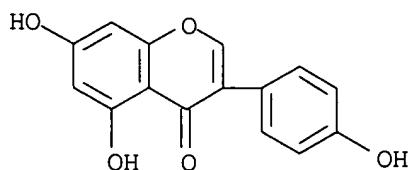
RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-beta-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

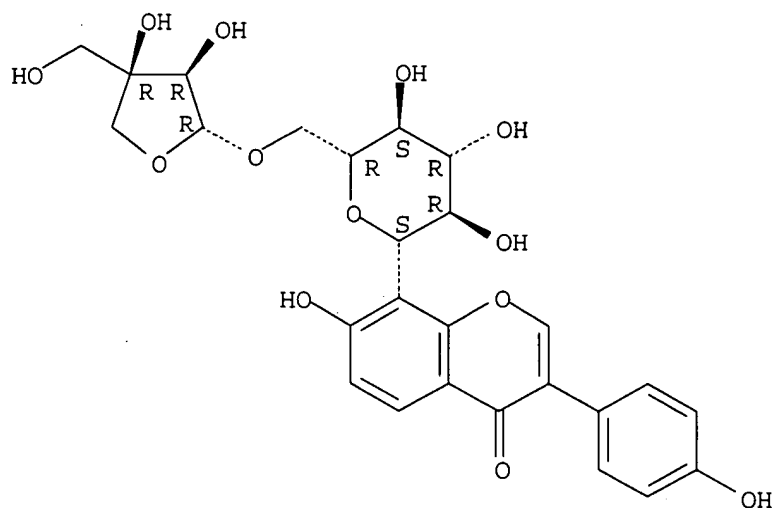


IT **446-72-0P**, NPI 031L
 RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (NPI 031L; isoflavonoids of *Pueraria lobata* for treating **alc.** dependence)
 RN 446-72-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



IT **103654-50-8P**, Mirificin **117047-07-1P**, NPI 031F
117060-54-5P, NPI 031H
 RL: PRP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (isoflavonoids of *Pueraria lobata* for treating **alc.** dependence)
 RN 103654-50-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 8-(6-O-D-apio- β -D-furanosyl- β -D-glucopyranosyl)-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

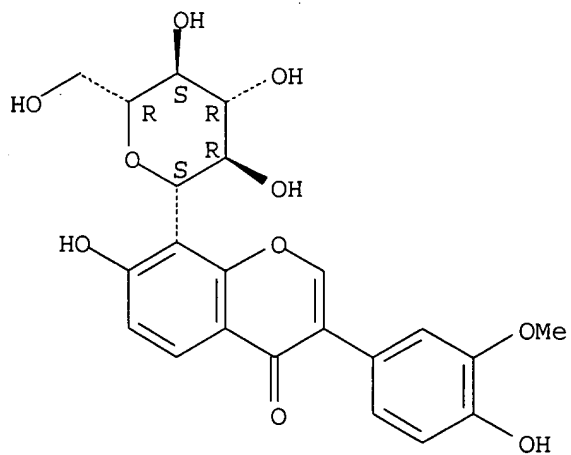
Absolute stereochemistry.



RN 117047-07-1 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxy-3-methoxyphenyl)- (9CI) (CA INDEX NAME)

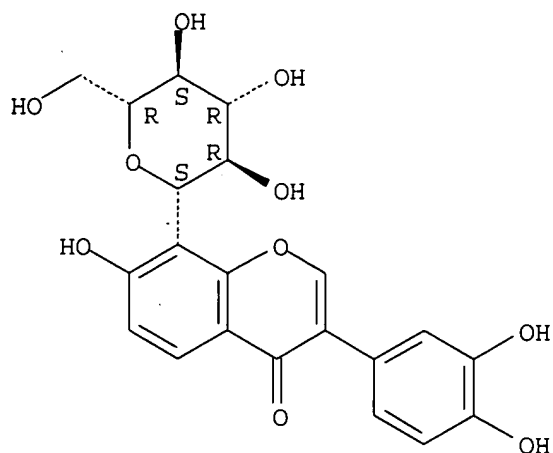
Absolute stereochemistry.



RN 117060-54-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(3,4-dihydroxyphenyl)-8-β-D-glucopyranosyl-7-hydroxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:311251 HCAPLUS

DOCUMENT NUMBER: 126:326770

TITLE: Method for the inhibition of ALDH-I useful in the treatment of alcohol dependence or alcohol abuse

INVENTOR(S): Vallee, Bert L.; Keung, Wing-Ming

PATENT ASSIGNEE(S): Human Biology, Inc., USA

SOURCE: U.S., log36 pp., Cont.-in-part of U.S. 5,204,369. CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5624910 ✓	A	19970429	US 1994-170272	19940524
US 5204369 ✓	A	19930420	US 1991-723404	19910701
WO 9300896	A1	19930121	WO 1992-US5598	19920630
W: AU, BR, CA, FI, HU, JP, KR, NO, RO, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
US 5886028	A	19990323	US 1997-840360	19970429
US 6255497	B1	20010703	US 1998-190360	19981112
PRIORITY APPLN. INFO.:			US 1991-723404	A2 19910701
			WO 1992-US5598	W 19920630
			US 1994-170272	A1 19940524
			US 1997-840360	A3 19970429

OTHER SOURCE(S): MARPAT 126:326770

AB Method for inhibiting aldehyde dehydrogenase activity using daidzin and/or daidzin analog and/or daidzin or daidzin analog in combination with a factor or factors which increase the bioavailability of the daidzin or daidzin analog, as ALDH-I inhibitory compds. or compns. Such inhibitory compds. or compns. are useful as pharmaceutical compns. in methods for the treatment of alc. dependence (i.e., alcoholism) or alc. abuse, for alc. sensitization, for extinguishing an alc.-drinking response, for suppressing an urge for alc., for inducing alc. intolerance, for preventing alcoholism in an individual with or without a susceptibility or

predisposition to alcoholism or alc. abuse, and for limiting alc. consumption in an individual whether or not genetically predisposed.

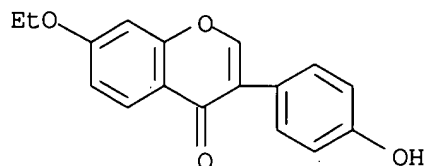
IT 146698-96-6P 146698-97-7P 146698-98-8P
146698-99-9P

RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)

(aldehyde dehydrogenase I inhibition in treatment of alc. dependence or alc. abuse)

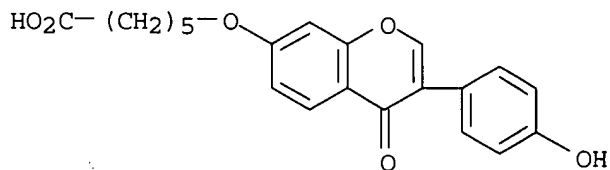
RN 146698-96-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-ethoxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



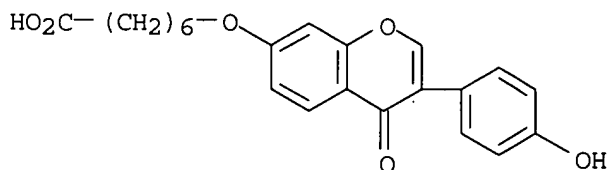
RN 146698-97-7 HCAPLUS

CN Hexanoic acid, 6-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



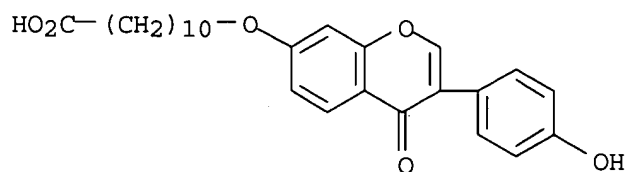
RN 146698-98-8 HCAPLUS

CN Heptanoic acid, 7-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



RN 146698-99-9 HCAPLUS

CN Undecanoic acid, 11-[[3-(4-hydroxyphenyl)-4-oxo-4H-1-benzopyran-7-yl]oxy] - (9CI) (CA INDEX NAME)



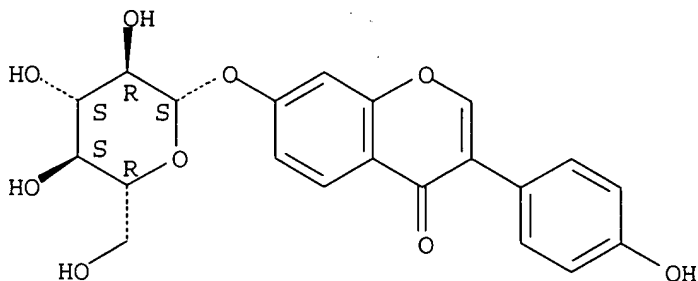
IT 552-66-9P, Daidzin

RL: BPR (Biological process); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(aldehyde dehydrogenase I inhibition in treatment of **alc.** dependence or **alc.** abuse)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



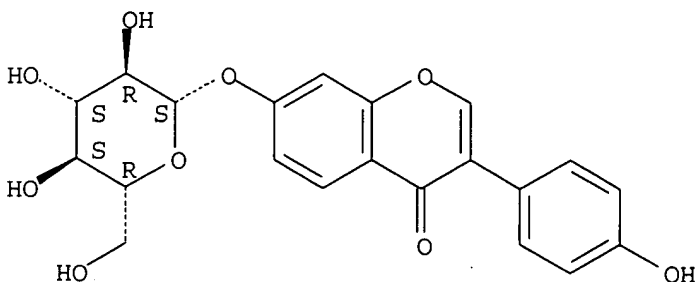
IT 552-66-9D, Daidzin, analogs

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(aldehyde dehydrogenase I inhibition in treatment of **alc.** dependence or **alc.** abuse)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L22 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:447759 HCAPLUS
DOCUMENT NUMBER: 125:135267

TITLE: Isoflavonoid compounds extracted from *Pueraria lobata* suppress alcohol preference in a pharmacogenetic rat model of alcoholism

AUTHOR(S): Lin, Renee C.; Guthrie, Sherri; Xie, Chang-Yi; Mai, Kai; Lee, David Y.; Lumeng, Lawrence; Li, Ting-Kai

CORPORATE SOURCE: School Medicine, Indiana University, Indianapolis, IN, 46202, USA

SOURCE: Alcoholism: Clinical and Experimental Research (1996), 20(4), 659-663
CODEN: ACRSDM; ISSN: 0145-6008

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

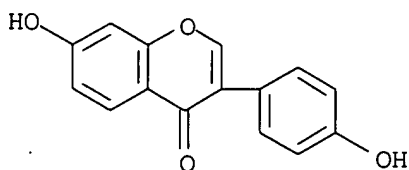
AB This study was conducted to test the antidipsotropic effect of daidzin and two other major isoflavonoids, daidzein and puerarin, from *Pueraria lobata* administered by the oral route. An alc.-preferring rat model, the selectively-bred P line of rats, was used for the study. All three isoflavonoid compds. were effective in suppressing voluntary alc. consumption by the P rats. When given orally to P rats at a dose of 100 mg/kg/day, daidzein, daidzin, and puerarin decreased ethanol intake by 75%, 50%, and 40%, resp. The decrease in alc. consumption was accompanied by an increase in water intake, so that the total fluid volume consumed daily remained unchanged. The effects of these isoflavonoid compds. on alc. and water intake were reversible. Suppression of alc. consumption was evident after 1 day of administration and became maximal after 2 days. Similarly, alc. preference returned to baseline levels 2 days after discontinuation of the isoflavonoids. Rats receiving the herbal exts. ate the same amts. of food as control animals, and they gained weight normally during the expts. When administered orally, none of these compds. affected the activities of liver alc. dehydrogenase and aldehyde dehydrogenase. Therefore, the reversal of alc. preference produced by these compds. may be mediated via the CNS. Data demonstrate that isoflavonoid compds. extracted from *Pueraria lobata* is effective in suppressing the appetite for alc. when taken orally, raising the possibility that other constituents of edible plants may exert similar and more potent actions.

IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
, Puerarin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(isoflavonoid compds. extracted from *Pueraria lobata* suppress alc preference)

RN 486-66-8 HCAPLUS

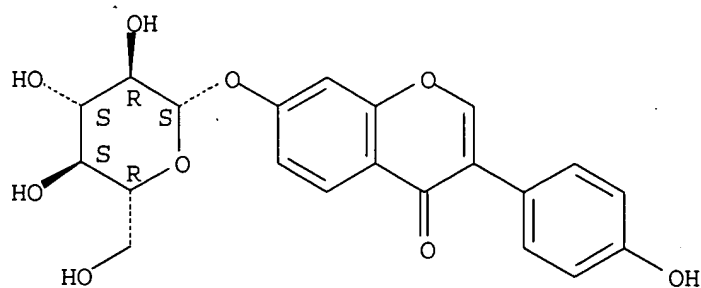
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

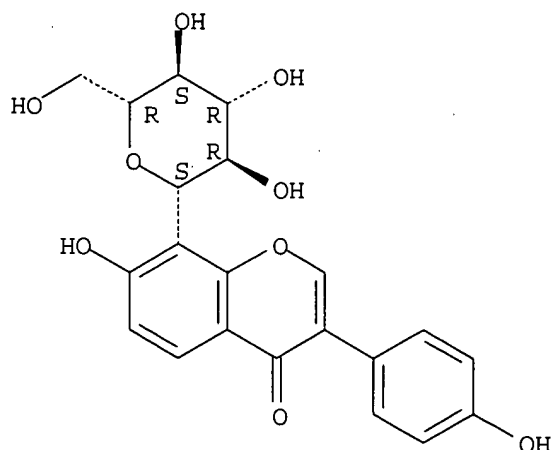
Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:276079 HCAPLUS

DOCUMENT NUMBER: 124:335437

TITLE: Suppression of alcohol intake after administration of the Chinese herbal medicine, NPI-028, and its derivatives

AUTHOR(S): Overstreet, David H.; Lee, Yue-Wei; Rezvani, Amir H.;

Pei, Yue-Hu; Criswell, Hugh E.; Janowsky, David S.

CORPORATE SOURCE: School Medicine, University North Carolina, Chapel Hill, NC, 27599-7178, USA

SOURCE: Alcoholism: Clinical and Experimental Research (1996), 20(2), 221-227

CODEN: ACRSDM; ISSN: 0145-6008

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The Chinese herbal medicine, NPI-028, has been used for centuries in China to counteract alc. intoxication. The present study used a number of different exptl. conditions to determine whether NPI-028 and its derivs. might selectively influence alc. intake in rodents that naturally exhibit high alc. intakes. It was determined that i.p. (IP) injections of NPI-028 (0.5,

0.75, and 1.0 g/kg) suppressed alc. intake by up to 30% in both alc.-preferring P and Fawn-Hooded (FH) rats during a continuous access schedule. These injections did not significantly affect food or water intakes, nor did the highest dose of NPI-028 (1 g/kg) alter blood ethanol levels after an IP injection of 2.5 g/kg of ethanol. In P rats, it was found that NPI-028 was orally active with the dose of 1.5 g/kg having a greater effect on ethanol intake than the 1.0 g/kg dose; once again, food and water intakes were not significantly altered. In FH rats maintained on a limited access schedule (1 h/day), alc. intake was completely abolished by 1.5 g/kg of NPI-028. Chronic IP administration of NPI-028 (0.75 g/kg) for four consecutive days in FH rats maintained on a continuous access schedule did not lead to any diminution of its alc.-suppressant effects. Thus, NPI-028 has significant effects on alc. intake without much effect on water and food intake, and tolerance does not readily develop to these effects. The IP administration of a partially purified extract (NPI-031) of NPI-028, obtained by countercurrent chromatog., also dose-dependently suppressed ethanol intake in FH rats, but the highest dose (200 mg/kg) also significantly decreased food intake. Finally, the IP administration of puerarin (NPI-31G), an isoflavone isolated from NPI-031 by countercurrent chromatog., significantly reduced ethanol intake in FH rats without affecting food or water intake. Therefore, NPI-028 and one of its pure components, NPI-031G, selectively reduced ethanol intake in alc.-preferring rats.

IT 3681-99-0, Puerarin

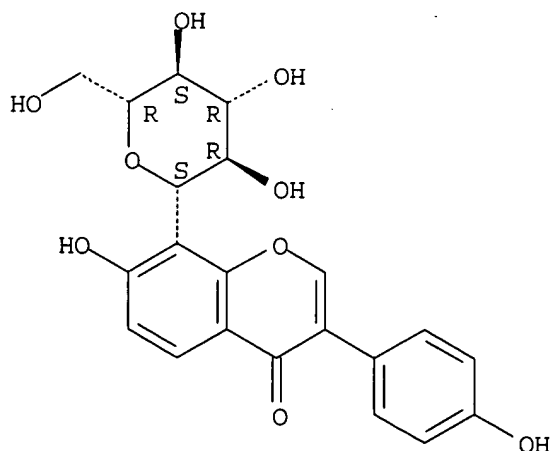
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(suppression of alc. intake after administration of the Chinese herbal medicine, NPI-028, and its derivs.)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

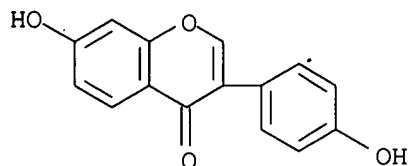
ACCESSION NUMBER: 1996:167556 HCAPLUS

DOCUMENT NUMBER: 124:352436

TITLE: Pueraria lobata. A medicinal plant against alcoholism?

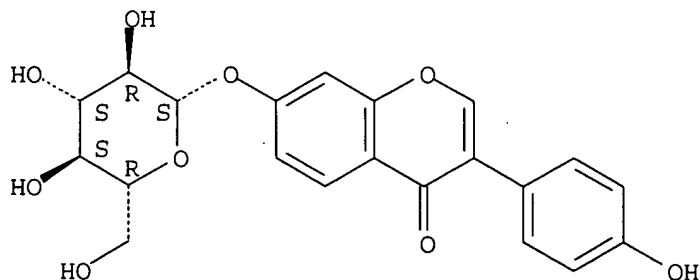
AUTHOR(S): Saller, Reinhard; Reichling, Juergen

CORPORATE SOURCE: Dep. Inn. Med., Univ. Zuerich, Zurich, CH-8091, Switz.
 SOURCE: Deutsche Apotheker Zeitung (1996), 136(9), 25-7
 CODEN: DAZE2; ISSN: 0011-9857
 PUBLISHER: Deutscher Apotheker Verlag
 DOCUMENT TYPE: Journal
 LANGUAGE: German
 AB The origin, the content, the pharmacol. effects and the inhibition of alc. metabolism of the Chinese drug Pueraria lobata is presented.
 IT 486-66-8, Daidzein 552-66-9, Daidzin 3681-99-0
 , Puerarin 114240-18-5 117047-07-1 117060-54-5
 RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses) (crude drugs from Pueraria roots against **alcoholism**)
 RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



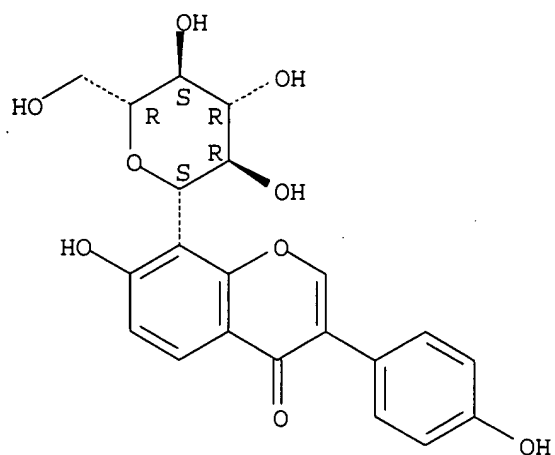
RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 3681-99-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

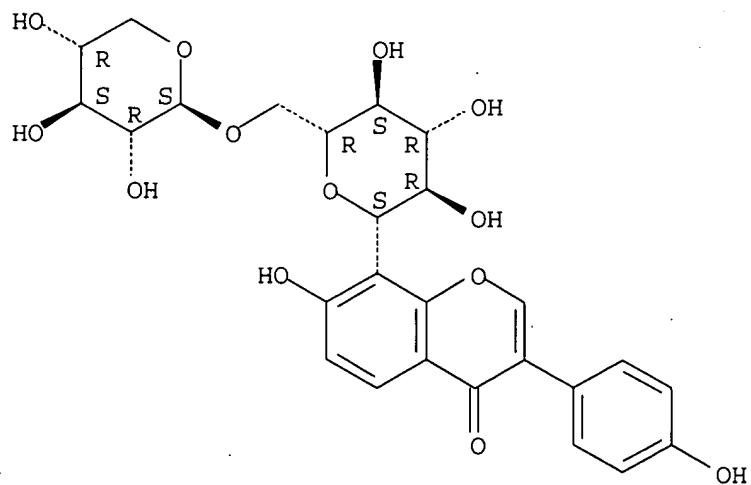
Absolute stereochemistry.



RN 114240-18-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-8-(6-O- β -D-xylopyranosyl- β -D-glucopyranosyl)- (9CI) (CA INDEX NAME)

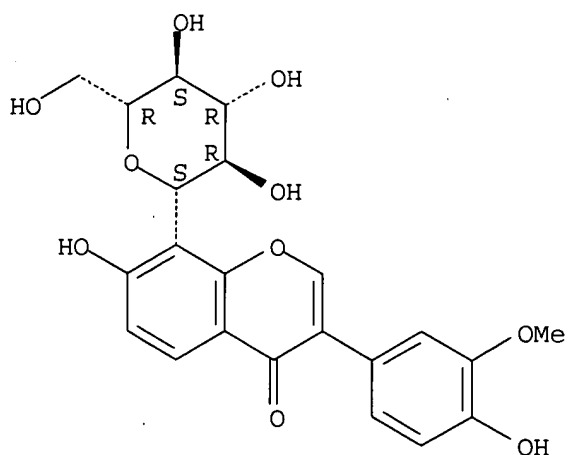
Absolute stereochemistry.



RN 117047-07-1 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxy-3-methoxyphenyl)- (9CI) (CA INDEX NAME)

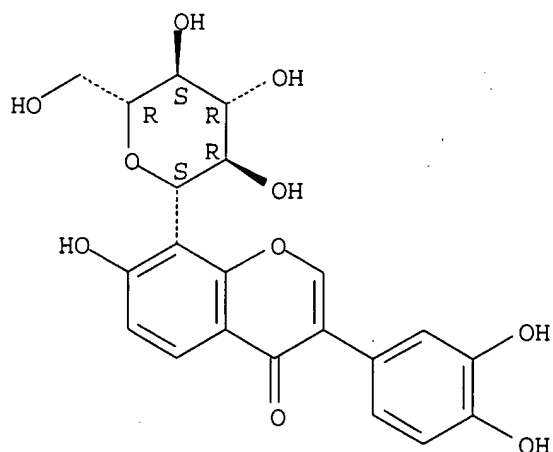
Absolute stereochemistry.



RN 117060-54-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(3,4-dihydroxyphenyl)-8- β -D-glucopyranosyl-7-hydroxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L22 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:342008 HCAPLUS

DOCUMENT NUMBER: 122:123038

TITLE: Daidzin, an antioxidant isoflavonoid, decreases blood alcohol levels and shortens sleep time induced by ethanol intoxication

AUTHOR(S): Xie, Chang-I; Lin, Renee C.; Antony, Veena; Lumeng, Lawrence; Li, Ting-Kai; Mai, Kai; Liu, Chenjiang; Wang, Qing-duan; Zhao, Zhi-hong; Wang, Gui-fang

CORPORATE SOURCE: School of Medicine, Indiana University, Indianapolis, IN, 46202, USA

SOURCE: Alcoholism: Clinical and Experimental Research (1994), 18(6), 1443-7

CODEN: ACRSDM; ISSN: 0145-6008

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The extract from an edible vine, *Pueraria lebata*, has been reported to be efficacious in lessening alc. intoxication. In this study, the authors have tested the efficacy of one of the major components, daidzin, from this plant extract. When ethanol (40% solution, 3 g/kg body weight) was given to

fasted rats intragastrically, blood alc. concentration (BAC) peaked at 30 min after alc. ingestion and reached 1.77 mg/mL (mean values). If daidzin (30 mg/kg) was mixed with the ethanol solution and given to animals intragastrically, BAC was found to peak at 90 min after alc. ingestion and reached only 1.20 mg/mL (vs. controls). The ability of daidzin to delay and decrease peak BAC level after ethanol ingestion was also observed in fed animals. In both fasted and fed rats given alc. without daidzin, BAC quickly declined after reaching its peak at 30 min. By contrast, BAC levels receded more slowly if daidzin was also fed to the animals. Daidzin showed a chronic effect. Rats fed daidzin for 7 days before ethanol challenge, but not on the day of challenge, also produced lower and later peak BAC levels. Interestingly, daidzin, whether fed to rats only once or chronically for 7 days, did not significantly alter activities of either alc. dehydrogenase or mitochondrial aldehyde dehydrogenase in the liver. Further expts. demonstrated that daidzin shortened sleep time for rats receiving ethanol intragastrically (7 g/kg) but not i.p. (2 g/kg). To test whether daidzin delayed stomach-emptying, [¹⁴C]polyethylene glycol was mixed with ethanol and fed to rats. It was found that, 30 min after intragastric feeding, more ethanol and [¹⁴C]polyethylene glycol remained in the stomach if rats were also given daidzin. Because daidzin is an isoflavonoid glucoside that possesses strong antioxidant activity, two other antioxidants (i.e., vitamin E and thiocctic acid) were tested. Similar to daidzin, these two antioxidants also delayed and suppressed peak BAC, as well as shortened sleep time induced by alc. ingestion. The authors conclude that: (1) daidzin is effective in countering alc. intoxication; (2) suppression of BAC by daidzin is due mainly to delay of stomach-emptying, but not to accelerated clearance of ethanol in circulation by liver enzymes; and (3) the effect of daidzin may in part be due to its antioxidant activity.

IT 552-66-9, Daidzin

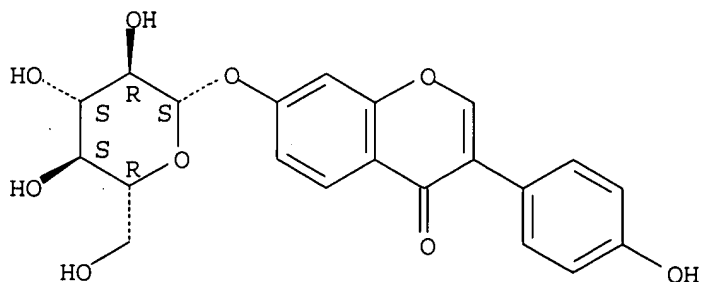
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antioxidant daidzin decreases blood alc. levels and shortens sleep time induced by ethanol intoxication)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L22 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:648509 HCAPLUS

DOCUMENT NUMBER: 121:248509

TITLE: Biochemical studies of a new class of alcohol dehydrogenase inhibitors from *Radix puerariae*

AUTHOR(S): Keung, Wing-Ming

CORPORATE SOURCE: Center Biochemical and Biophysical Sciences and Medicine, Harvard Medical School and Brigham and Women's Hospital, Boston, MA, 02115, USA

SOURCE: Alcoholism: Clinical and Experimental Research (1993), 17(6), 1254-60

CODEN: ACRSDM; ISSN: 0145-6008

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Two potent, reversible inhibitors of human alc. dehydrogenase (ADH) isoenzymes were isolated from *Radix puerariae* (RP, commonly known as kudzu root) and identified as the isoflavones daidzein and genistein. The 4'-methoxy derivs. of daidzein (trivial name, formononetin) and genistein (biochanin A), minor constituents of RP, were also shown to be ADH inhibitors. All of these isoflavones inhibit the human $\gamma_2\gamma_2$ -ADH isoenzyme competitively with respect to ethanol and uncompetitively with respect to NAD⁺. A survey of more than 40 structurally related compds. revealed one more isoflavone (prunetin) and four flavones (7-hydroxyflavone, apigenin, galangin, and kaempferol) that inhibit ADH. The isoflavone inhibitors, however, are far more potent than the flavone inhibitors. Among the isoflavones studied, genistein is the most potent with $K_i = 0.1 \mu\text{M}$ toward $\gamma_2\gamma_2$ -ADH. Human ADH isoenzymes differ in their sensitivity to these inhibitors in the order $\gamma_2\gamma_2$ - > $\gamma_1\gamma_1$ - > $\alpha\alpha$ - > $\pi\pi$ - > XXADH. These inhibitors do not affect the $\beta_1\beta_1$ - and $\beta_2\beta_2$ -ADH isoenzymes at concns. as high as 20 μM . Rat and rabbit class I ADHs are also inhibited by these isoflavone inhibitors. The 7-O-glucosyl derivs. of daidzein, genistein, formononetin, and biochanin A do not inhibit ADH, but are potent aldehyde dehydrogenase inhibitors.

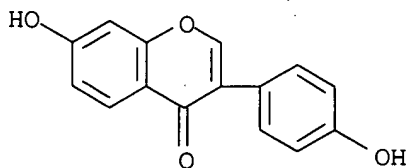
IT 486-66-8, Daidzein

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(Biochem. studies of a new class of alc. dehydrogenase inhibitors from *Radix puerariae*)

RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

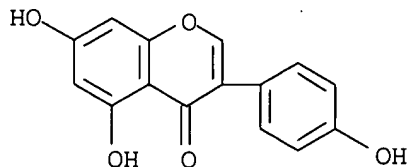


IT 446-72-0, Genistein 552-59-0, Prunetin

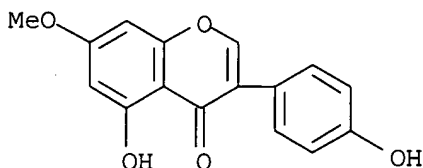
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(alc. dehydrogenase inhibitors from *Radix puerariae*)

RN 446-72-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-59-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 5-hydroxy-3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA INDEX NAME)



L22 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:185706 HCAPLUS

DOCUMENT NUMBER: 118:185706

TITLE: Method using daidzin or daidzin analog for the inhibition of aldehyde dehydrogenase I (ALDH-I), and use in the treatment of alcohol dependence or alcohol abuse

INVENTOR(S): Vallee, Bert L.; Keung, Wing Ming

PATENT ASSIGNEE(S): Endowment for Research in Human Biology, Inc., USA

SOURCE: PCT Int. Appl., 98 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9300896	A1	19930121	WO 1992-US5598	19920630
W: AU, BR, CA, FI, HU, JP, KR, NO, RO, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
US 5204369	A	19930420	US 1991-723404	19910701
AU 9223085	A1	19930211	AU 1992-23085	19920630
EP 592583	A1	19940420	EP 1992-915216	19920630
EP 592583	B1	20010131		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
AT 198983	E	20010215	AT 1992-915216	19920630
JP 3170281	B2	20010528	JP 1993-502339	19920630
NO 9304911	A	19940228	NO 1993-4911	19931230
US 5624910	A	19970429	US 1994-170272	19940524
US 6255497	B1	20010703	US 1998-190360	19981112
PRIORITY APPLN. INFO.:			US 1991-723404	A2 19910701

WO 1992-US5598 A 19920630
 US 1994-170272 A1 19940524
 US 1997-840360 A3 19970429

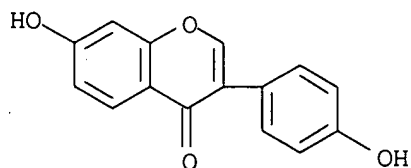
OTHER SOURCE(S): MARPAT 118:185706

AB ALDH-I is inhibited by daidzin (I) or an analog thereof, optionally with factor(s) increasing the bioavailability of the I or I analog. Such inhibitory compds. or compns. are useful as pharmaceutical compns in methods for the treatment of alc. dependence (i.e. alcoholism) or alc. abuse, for alc. sensitization, for extinguishing an alc.-drinking response, for suppressing an urge for alc., for inducing alc. intolerance, for preventing alcoholism in an individual with or without a susceptibility or predisposition to alc. or alc. abuse, and for limiting alc. consumption in an individual, whether or not the individual is genetically predisposed. I was isolated from the crude drug Radix Puerariae (prepared as the dried root of Pueraria lobata). Kinetic consts. for the inhibition by I of ALDH isoenzymes I and II were 40 and 20,000 nM, resp. Preparation and inhibitory activity of ether derivs., e.g. daidzein 7-(ω -carboxydecyl) ether, is also presented. I, at doses of 5, 10, and 30 mg/day suppressed alc. intake by hamsters by 20, 50, and 80%, resp. I in a crude Radix Puerariae methanolic extract was 5-10 times more potent than pure I.

IT 486-66-8D, analogs 552-66-9, Daidzin
 RL: BIOL (Biological study)
 (aldehyde dehydrogenase I inhibition with, **alcoholism**
 treatment in relation to)

RN 486-66-8 HCAPLUS

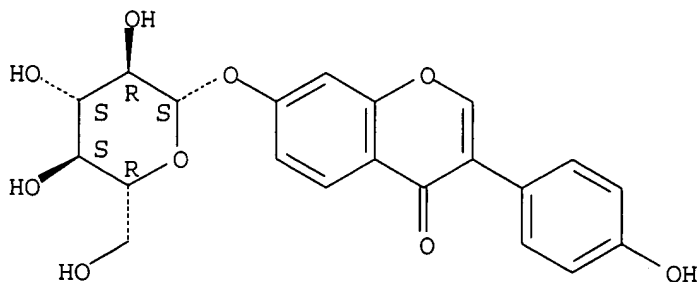
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

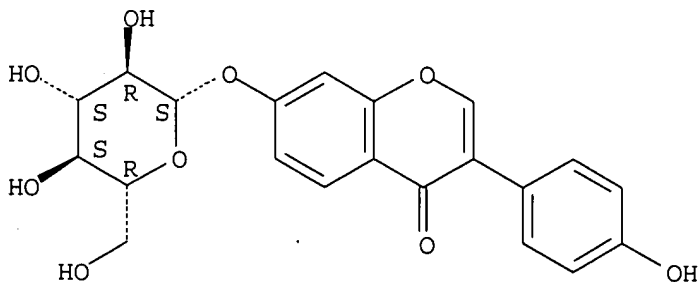


L22 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:185661 HCAPLUS

DOCUMENT NUMBER: 118:185661
 TITLE: Daidzin: A potent, selective inhibitor of human mitochondrial aldehyde dehydrogenase
 AUTHOR(S): Keung, Wing Ming; Vallee, Bert L.
 CORPORATE SOURCE: Cent. Biochem. Biophys. Sci. Med., Harvard Med. Sch., Boston, MA, 02115, USA
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1993), 90(4), 1247-51
 CODEN: PNASA6; ISSN: 0027-8424
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Human mitochondrial aldehyde dehydrogenase (ALDH-I) is potently, reversibly, and selectively inhibited by an isoflavone isolated from *Radix puerariae* and identified as daidzin, the 7-glucoside of 4',7-dihydroxyisoflavone. Kinetic anal. with formaldehyde as substrate reveals that daidzin inhibits ALDH-I competitively with respect to formaldehyde with a K_i of 40 nM, and uncompetitively with respect to the coenzyme NAD^+ . The human cytosolic aldehyde dehydrogenase isoenzyme (ALDH-II) is nearly 3 orders of magnitude less sensitive to daidzin inhibition. Daidzin does not inhibit human class I, II, or III alc. dehydrogenases, nor does it have any significant effect on biol. systems that are known to be affected by other isoflavones. Among more than 40 structurally related compds. surveyed, 12 inhibit ALDH-I, but only prunetin and 5-hydroxydaidzin (genistin) combine high selectivity and potency, although they are 7- to 15-fold less potent than daidzin. Structure-function relationships have established a basis for the design and synthesis of addnl. ALDH inhibitors that could both be yet more potent and specific. Perhaps the ALDH-I inhibitors could be useful in the treatment of alcoholism.
 IT 552-66-9, Daidzin
 RL: BIOL (Biological study)
 (of *Radix puerariae* and aldehyde dehydrogenase of humans inhibition by, **alcoholism** treatment and structure in relation to)
 RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L22 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:625995 HCAPLUS

DOCUMENT NUMBER: 115:225995

TITLE: Tetrahydroisoquinoline alkaloids mimic direct but not receptor-mediated inhibitory effects of estrogens and phytoestrogens on testicular endocrine function. Possible significance for Leydig cell insufficiency in

alcohol addiction
 AUTHOR(S): Stammel, Waltraud; Thomas, Helmut; Staib, Wolfgang;
 Kuehn-Velten, W. Nikolaus
 CORPORATE SOURCE: Abt. Physiol. Chem., Univ. Ulm, Ulm, Germany
 SOURCE: Life Sciences (1991), 49(18), 1319-29
 CODEN: LIFSAK; ISSN: 0024-3205

DOCUMENT TYPE: Journal
 LANGUAGE: English

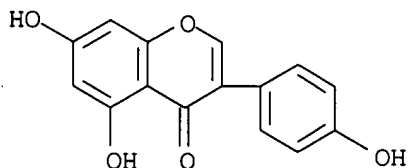
AB Possible effects of various tetrahydroisoquinokines (TIQs) on rat testicular endocrine function were tested in vitro to prove whether these compds., some of which have been claimed to accumulate in alcoholics, may be mediators of the development of Leydig cell insufficiency, a well-known side-effect of ethanol ingestion. TIQ effects on different levels of regulation of testis function were compared in vitro with estrogen effects, since both classes of compds. have structural similarities. Gonadotropin-stimulated testosterone production by testicular Leydig cells was inhibited by tetrahydropapaveroline and isosalsoline, the IC50 values (30 μ M) being comparable to those of estradiol (3 μ M), 2-hydroxyestradiol (10 μ M), and the phytoestrogens, coumestrol (15 μ M) and genistein (7 μ M); salsolinol (85 μ M) and salsoline (240 μ M) were less effective, and salsolidine was ineffective. None of these TIQs interacted significantly with testicular estrogen receptor as analyzed by estradiol displacement. However, tetrahydropapaveroline, isosalsoline, and salsolinol competitively inhibited (Ki 130-150 μ M) substrate binding to cytochrome P450XVII, one key enzyme of androgen biosynthesis, with similar efficiency as the estrogens did (Ki 50-110 μ M); salsoline and salsolidine were again much less effective. Thus, certain TIQs may amplify peripheral inhibitory effects of ethanol on testicular endocrine function by their interaction with at least one enzyme of the androgen biosynthetic pathway.

IT 446-72-0

RL: BIOL (Biological study)
 (testicular endocrine function response to, during alc.
 addiction)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



L22 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1986:45507 HCAPLUS

DOCUMENT NUMBER: 104:45507

TITLE: The antidysrhythmic effect of Pueraria isoflavones

AUTHOR(S): Fan, Lili; Zhao, Dehua; Zhao, Minqi; Zeng, Guiyun

CORPORATE SOURCE: Inst. Mater. Med., Chin. Acad. Med. Sci., Beijing, Peop. Rep. China

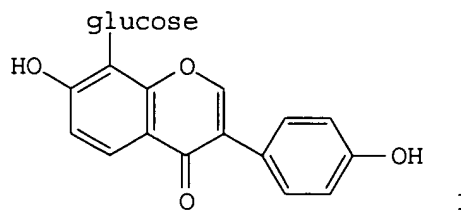
SOURCE: Yaoxue Xuebao (1985), 20(9), 647-51

CODEN: YHHPAL; ISSN: 0513-4870

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

GI



AB In anesthetized rats, arrhythmia induced by aconitine and BaCl₂ was antagonized by i.v. or orally administered puerarin (I) [3681-99-0], the main constituent of Pueraria isoflavones. These 2 types of arrhythmia were also attenuated after oral administration of daidzein [486-66-8], the major aglycon of Pueraria isoflavones, and by equivalent doses of the alc. extract of Pueraria, which contains 40% isoflavones. Furthermore, ventricular fibrillation induced by CaCl₂ in rats and by CHCl₃ in mice was prevented by daidzein or the alc. extract of Pueraria given orally. The duration of the ventricular fibrillation produced by occlusion of the coronary artery in rats was decreased by daidzein given orally for 4 days. In anesthetized cats, the duration of monophasic action potentials and the effective refractory period of the heart in situ were prolonged by i.v. injection of puerarin. Apparently, Pueraria isoflavones can decrease myocardial excitability and may be beneficial in the treatment of myocardial ischemia.

L22 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1976:437126 HCAPLUS

DOCUMENT NUMBER: 85:37126

TITLE: Antimicrobial activity and chemical composition of Genista tinctoria

AUTHOR(S): Palamarchuk, A. S.; Bondarenko, V. E.

CORPORATE SOURCE: Gomel. Gos. Univ., Gomel, USSR

SOURCE: Rastitel'nye Resursy (1976), 12(2), 229-32

CODEN: RRESA8; ISSN: 0033-9946

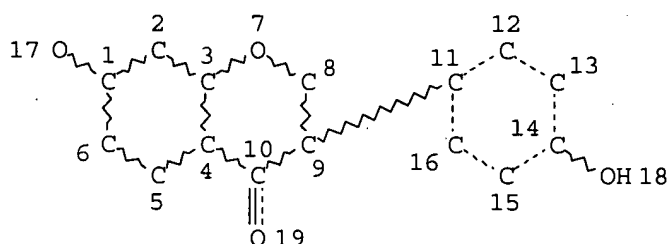
DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Alkaloids, tannic substances, 4 flavonoids (genistein [446-72-0], genistin [529-59-9], luteolin [491-70-3], and digitoflavonoside [5373-11-5]), ascorbic acid [50-81-7], and minerals were isolated from the above-ground portions of dyer's greenweed found in Soviet pine forests. Aqueous-alc. tinctures from the above-ground portions of dyer's greenweed were active against Staphylococcus aureus in a 1:640 dilution, with tinctures from the flowers, leaves, and stems active in dilns. of 1:1280, 1:160, and 1:10, resp. The exts. contained relatively large amts. of Ca, K, Al, Ba, Mn, Si, and P.

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L1 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

L3	1168	SEA FILE=REGISTRY SSS FUL L1
L4	48	SEA FILE=REGISTRY ABB=ON PLU=ON ALDH2 OR ALDH(L) 2
L6	27	SEA FILE=REGISTRY ABB=ON PLU=ON ALCOHOL DEHYDROGENASE 2?/CN
L10	3	SEA FILE=REGISTRY ABB=ON PLU=ON ("5-HYDROXYINDOLE-3-ACETIC ACID"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID GLUCURONIDE"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID O-GLUCURONIDE"/CN OR "5-HYDROXYINDOLE-3-ACETIC ACID SULFATE"/CN)
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L14	1	SEA FILE=REGISTRY ABB=ON PLU=ON HYDROXYINDOLE (L) ACETALDEHYDE
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L16	684	SEA FILE=HCAPLUS ABB=ON PLU=ON L6 OR L4 OR ALDH2 OR ALDH (W) 2 OR ALCOHOL (W) DEHYDROGENASE (W) 2
L17	8	SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L16
L18	9710	SEA FILE=HCAPLUS ABB=ON PLU=ON L10 OR L11 OR L12 OR L13 OR L14 OR (HYDROXYINDOL? OR DIHYDROXYPHENYL) (2A) (ACETIC (W) ACID OR ACETALDEHYDE)
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L23	207348	SEA FILE=HCAPLUS ABB=ON PLU=ON ("DRUG DEPENDENCE"/CT OR ALCOHOLISM/CT OR "DRUG DEPENDENCE (L) ALCOHOLISM"/CT OR "ALC. DEPENDENCE SYNDROME"/CT OR "ALCOHOL ABUSE"/CT OR "ALCOHOL DEPENDENCE SYNDROME"/CT OR CIRRHOSIS/CT OR "FETAL ALCOHOL

SYNDROME"/CT OR "POISONING, BIOLOGICAL"/CT OR ETHANOL/CT OR
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L25 128 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 AND L15
L26 96 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 NOT (L17 OR L20 OR L22)
L27 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND PD=<MAY 12, 1998

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L27 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:519341 HCAPLUS
DOCUMENT NUMBER: 135:91861
TITLE: Method of preparing and using isoflavones
INVENTOR(S): Empie, Mark; Gugger, Eric
PATENT ASSIGNEE(S): Archer Daniels Midland Co., USA
SOURCE: U.S., 8 pp., Cont.-in-part of U.S. 6,033,714.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6261565	B1	20010717	US 1998-162038	19980928
US 5702752	A	19971230	US 1996-614545	19960313 <--
IL 130611	A1	20010430	IL 1997-130611	19970310
US 5792503	A	19980811	US 1997-868629	19970604
US 6033714	A	20000307	US 1998-35588	19980305
AU 9887879	A1	19990422	AU 1998-87879	19981001
AU 748832	B2	20020613		
ZA 9808962	A	19990913	ZA 1998-8962	19981001
NZ 332131	A	20010629	NZ 1998-332131	19981001
CA 2249501	C	20030114	CA 1998-2249501	19981001
EP 906761	A2	19990407	EP 1998-308060	19981002
EP 906761	A3	19990519		
EP 906761	B1	20040714		
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JP 11221048	A2	19990817	JP 1998-296187	19981002
MX 9808146	A	20001031	MX 1998-8146	19981002
AT 270894	E	20040715	AT 1998-308060	19981002
EP 1466609	A1	20041013	EP 2004-15530	19981002
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
ES 2224337	T3	20050301	ES 1998-308060	19981002
HK 1016879	A1	20050422	HK 1999-101886	19990427
US 6391308	B1	20020521	US 2000-615239	20000713
US 6391309	B1	20020521	US 2000-615240	20000713
US 6391310	B1	20020521	US 2000-616205	20000713
US 6395279	B1	20020528	US 2000-616150	20000713
US 6399072	B1	20020604	US 2000-615152	20000713
US 2002168433	A1	20021114	US 2002-136103	20020501
US 2002187211	A1	20021212	US 2002-136158	20020501
US 6509381	B2	20030121		
US 2003003168	A1	20030102	US 2002-137490	20020501
US 6900240	B2	20050531		
US 6518319	B1	20030211	US 2002-136150	20020501
US 2003064938	A1	20030403	US 2002-136079	20020501

PRIORITY APPLN. INFO.:

US 1996-614545	A3 19960313
US 1997-868629	A2 19970604
US 1997-60549P	P 19971002
US 1998-35588	A2 19980305
IL 1997-120409	A3 19970310
US 1998-162038	A 19980928
US 1998-162038P	P 19980928
EP 1998-308060	A3 19981002
US 2000-615152	A3 20000713
US 2000-615239	A3 20000713
US 2000-615240	A3 20000713
US 2000-616150	A3 20000713
US 2000-616205	A3 20000713

AB The invention provides for a refinement of phytochemicals in order to tailor the refined end product to particular human dietary needs. More particularly, a composition is prepared by extracting phytochemicals from plant matter.

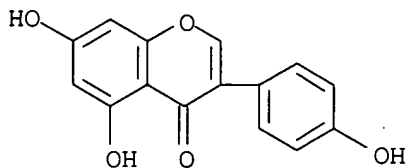
This composition is enriched preferably in two or more isoflavones, lignans, saponins, catechins and phenolic acids. Soy is the preferred source of these chemicals; however, other plants may also be used, such as red clover, kudzu, flax, and cocoa. The composition is a dietary supplement for treatment of various cancers, pre-and-post-menstrual syndromes, and various other disorders.

IT 446-72-0, Genistein 486-66-8, Daidzein
40957-83-3, Glycitein

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(isoflavone preparing method and use)

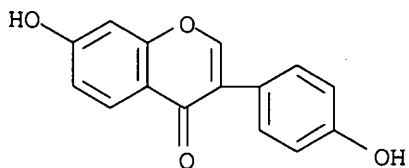
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CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



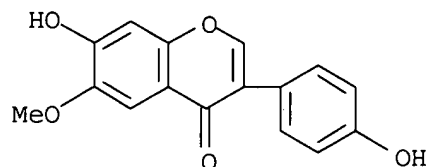
RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 40957-83-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2001:25674 HCAPLUS
 DOCUMENT NUMBER: 134:70658
 TITLE: Production of isoflavone enriched fractions from soy protein extracts
 INVENTOR(S): Gugger, Eric; Grabiell, Richard
 PATENT ASSIGNEE(S): Archer Daniels Midland Company, USA
 SOURCE: U.S., 15 pp., Cont.-in-part of U. S. 6,033,714.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 6
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6171638	B1	20010109	US 2000-478751	20000106
US 5702752	A	19971230	US 1996-614545	19960313 <--
IL 130611	A1	20010430	IL 1997-130611	19970310
US 5792503	A	19980811	US 1997-868629	19970604
US 6033714	A	20000307	US 1998-35588	19980305
US 6565912	B1	20030520	US 2000-697696	20001026
PRIORITY APPLN. INFO.:			US 1996-614545	A3 19960313
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			US 2000-478751	A2 20000106

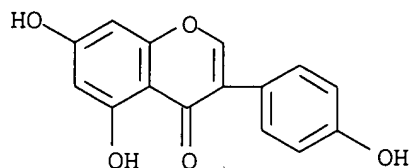
AB The temperature sensitive differential of the solubilities of various isoflavone fractions is used to initially sep. the fractions by heating an aqueous soy molasses or soy whey feed stream. The temperature of the feed stream is selected according to the temperature at which a desired isoflavone fraction or fractions become soluble. Then, the heated feed stream is passed through an ultrafiltration membrane or reverse osmosis in order to concentrate the solids. The resulting permeate is put through a resin adsorption process carried out in at least one liquid chromatog. column to further sep. the desired isoflavone fractions. Various processes are described for drying and crystallizing the isoflavone fractions to a powder. A solvent is then added to the isoflavone fraction to dissolve impurities and rehydrate the dry powder. Usually, the rehydrated isoflavone is used as an additive to a food ingredient or food product. At various points in the process a selected amount of isoflavones may or may not be blended with the powder in order to bring the isoflavone to a desired characteristic specification or to produce a food ingredient or food product.

IT 446-72-0P, Genistein 486-66-8P, Daidzein
 40246-10-4P, Glycitin 40957-83-3P, Glycitein
 51011-05-3P 71385-83-6P 73566-30-0P
 124590-31-4P 134859-96-4P 137705-39-6P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); FFD (Food or feed use); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); USES (Uses)
(production of isoflavone enriched fractions from soy protein exts.)

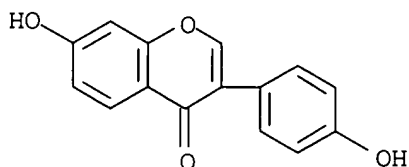
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

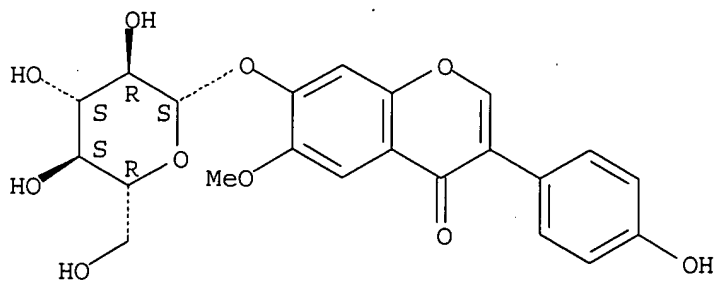
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 40246-10-4 HCAPLUS

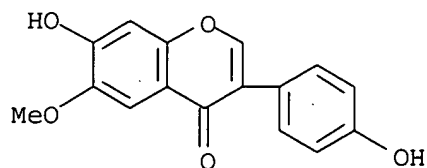
CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 40957-83-3 HCAPLUS

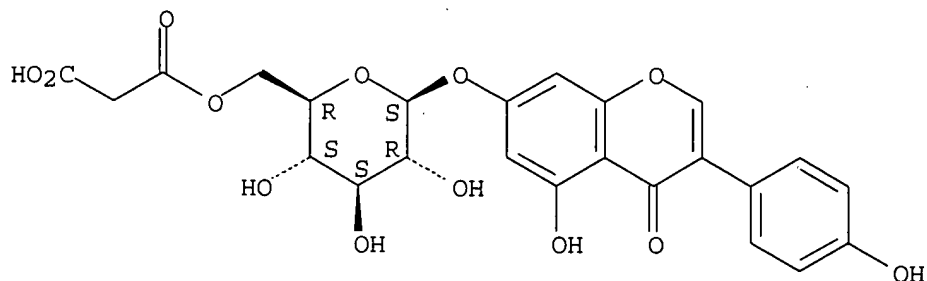
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)



RN 51011-05-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

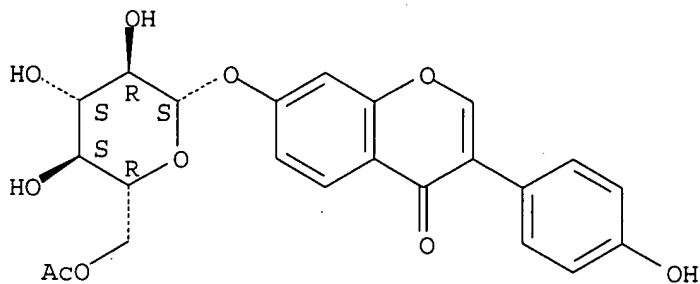
Absolute stereochemistry.



RN 71385-83-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-acetyl-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

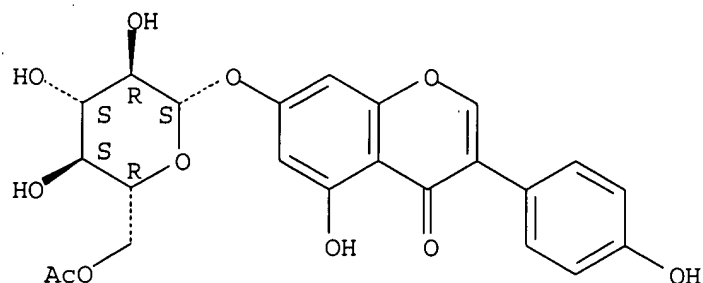
Absolute stereochemistry.



RN 73566-30-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-acetyl-β-D-glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

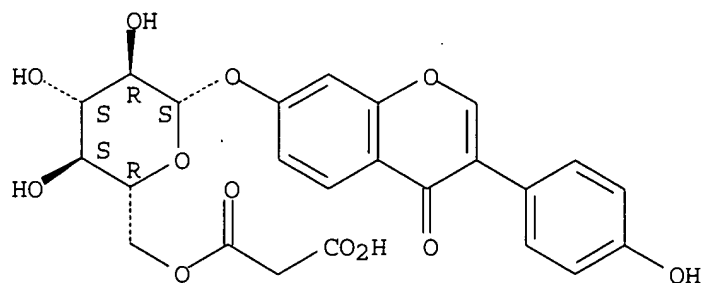
Absolute stereochemistry.



RN 124590-31-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

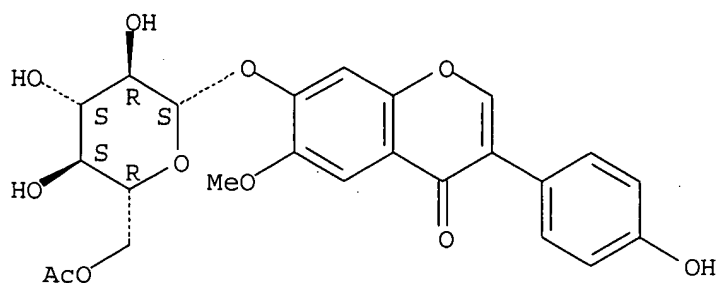
Absolute stereochemistry. Rotation (-).



RN 134859-96-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-acetyl-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

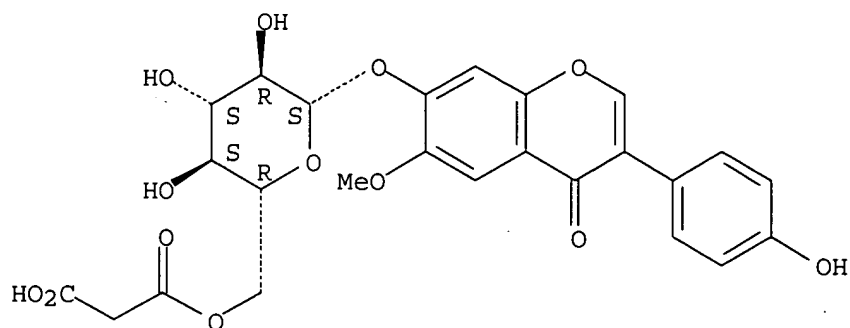
Absolute stereochemistry.



RN 137705-39-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 64-17-5, Ethanol, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (solvent; production of isoflavone enriched fractions from soy protein
 exts.)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:789453 HCAPLUS

DOCUMENT NUMBER: 130:138466

TITLE: Quantification of isoflavones by capillary zone
 electrophoresis in soybean seeds: effects of variety
 and environment

AUTHOR(S): Aussenac, Thierry; Lacombe, Stephanie; Dayde, Jean

CORPORATE SOURCE: Laboratoire d'Agrophysiologie, ESA Purpan (Ecole
 Supérieure d'Agriculture de Purpan), Toulouse, Fr.

SOURCE: American Journal of Clinical Nutrition (1998
), 68(6, Suppl.), 1480S-1485S
 CODEN: AJCNAC; ISSN: 0002-9165

PUBLISHER: American Society for Clinical Nutrition

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Soybean isoflavones (genistin, daidzin, glycitin, and their malonyl forms
 and aglycons) are thought to be responsible for the astringent taste of
 soy foods. Generally, HPLC with a methanol and water elution gradient is
 used for isoflavone quantification; but capillary zone electrophoresis
 (CZE) has been used more recently to sep. several flavonoids in plant
 exts. The results of CZE anal. of isoflavones in soybean exts. are
 presented. Conditions for separation by using CZE were optimized for anal. of
 soybean isoflavones. The results of extraction at different temps. and with
 different comps. of solvent were compared. Total extraction of isoflavones
 was not affected by temperature but was affected by composition of the solvent.
 Malonyl forms of isoflavones were thermally unstable. The isoflavone
 content of different varieties of soybean seeds sown on different dates
 were also analyzed. The total isoflavone content varied among different
 varieties and with sowing dates. Interactions between the variety and the
 sowing date also affected isoflavone composition. Thus, the variety of soybean
 seed and environmental growing conditions, such as sowing date, can

contribute to seed quality by reducing its isoflavone content, modifying its isoflavone composition, or both.

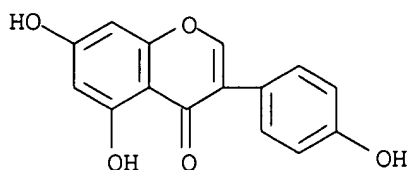
IT 446-72-0, Genistein 486-66-8, Daidzein 529-59-9
; Genistin 552-66-9, Daidzin 40246-10-4, Glycitin
51011-05-3 124590-31-4 137705-39-6

RL: ANT (Analyte); ANST (Analytical study)

(quantification of isoflavones by capillary zone electrophoresis in soybean seeds: effects of variety and environment)

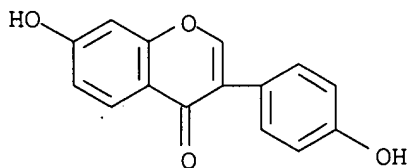
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

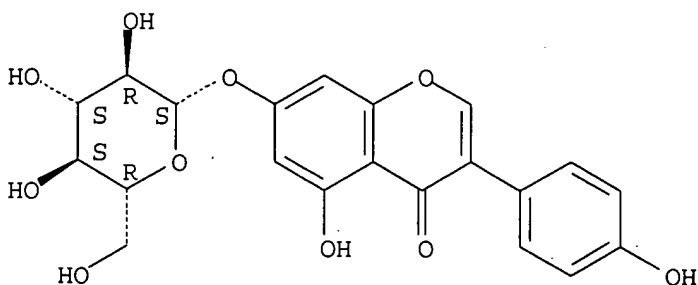
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

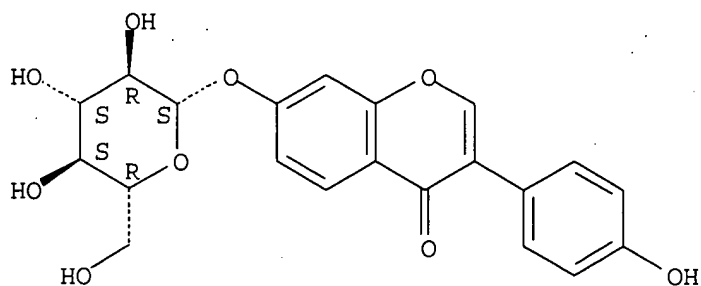
Absolute stereochemistry.



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

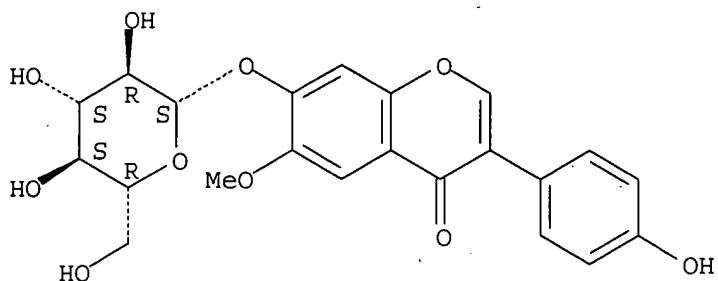
Absolute stereochemistry. Rotation (-).



RN 40246-10-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

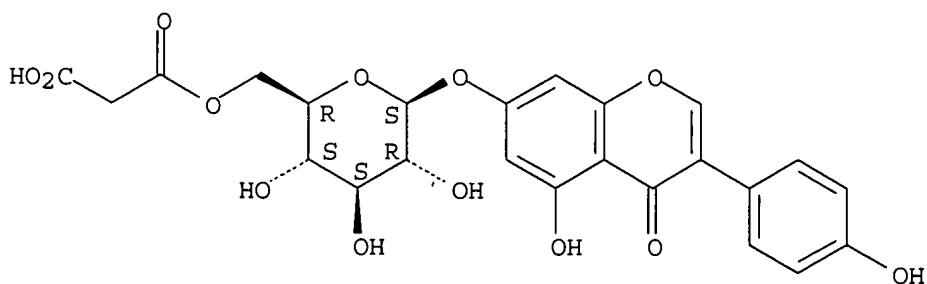
Absolute stereochemistry.



RN 51011-05-3 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME).

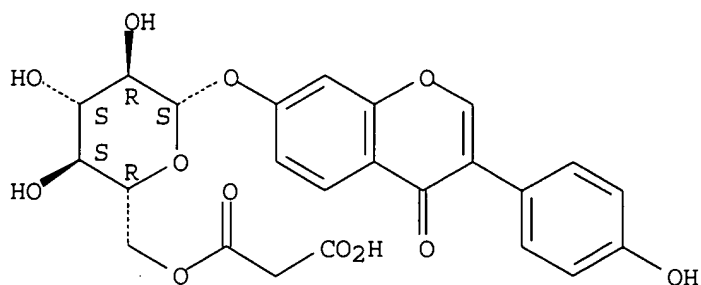
Absolute stereochemistry.



RN 124590-31-4 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

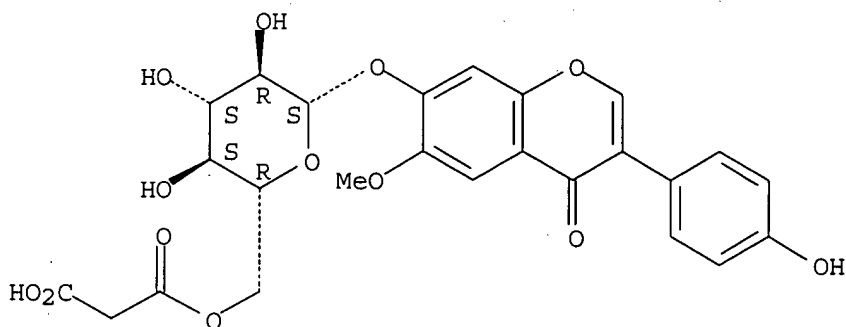
Absolute stereochemistry. Rotation (-).



RN 137705-39-6 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-[[6-O-(carboxyacetyl)-β-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 64-17-5, Ethanol, analysis

RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(quantification of isoflavones by capillary zone electrophoresis in
soybean seeds: effects of variety and environment)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:634676 HCAPLUS

DOCUMENT NUMBER: 130:1274

TITLE: Enhancement of glycine receptor function by ethanol:
role of phosphorylation

AUTHOR(S): Mascia, Maria Paola; Wick, Marilee J.; Martinez, Larry
D.; Harris, R. Adron

CORPORATE SOURCE: Department of Pharmacology, University of Colorado
Health Sciences Center, Denver, CO, 80262, USA

SOURCE: British Journal of Pharmacology (1998),
125(2), 263-270

PUBLISHER: CODEN: BJPCBM; ISSN: 0007-1188
Stockton Press

DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The effects of several kinase inhibitors (staurosporine, GF 109203X, H89, KN62, genistein) and of the phosphatase inhibitor calyculin A were studied on the ethanol potentiation and on the function of homomeric $\alpha 1$ glycine receptor expressed in *Xenopus* oocytes using a two electrode voltage clamp recording technique. The function of the homomeric $\alpha 1$ glycine receptor was not modified in *Xenopus* oocytes pretreated with kinase inhibitors or with the phosphatase inhibitor calyculin A. The potentiation of the glycine receptor function induced by ethanol (10 - 200 mM) was significantly reduced in *Xenopus* oocytes pretreated with the PKC inhibitors staurosporine or GF 109203X. No differences in propofol (2.5 μ M) or halothane (250 μ M) actions were found after exposure of *Xenopus* oocytes to staurosporine. No differences in ethanol sensitivity were found after exposure of *Xenopus* oocytes expressing glycine $\alpha 1$ receptors to H89, KN62, genistein or to the phosphatase inhibitor calyculin A. The mutant $\alpha 1$ (S391A), in which the PKC phosphorylation site at serine 391 was mutated to alanine, was less sensitive to the effects of ethanol than was the $\alpha 1$ wild type receptor. Moreover, the ethanol potentiation of the glycine receptor function was not affected by treatment with staurosporine in oocytes expressing $\alpha 1$ (S391A). The splice variant of the $\alpha 1$ glycine receptor subunit, α lins, containing eight addnl. amino acids and a potential phosphorylation site for PKA, did not differ from wild type for sensitivity to ethanol. These results indicate that phosphorylation by PKC of the homomeric $\alpha 1$ glycine receptor subunit modulates ethanol potentiation, but not the function of the glycine receptor.

IT 64-17-5, Ethanol, biological studies

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (glycine receptor function enhancement by ethanol and role of phosphorylation)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

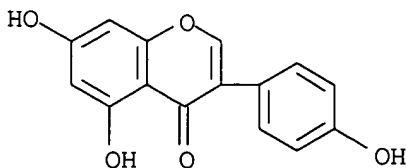
H₃C-CH₂-OH

IT 446-72-0, Genistein

RL: ARG (Analytical reagent use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses) (kinase inhibitor; glycine receptor function enhancement by ethanol and role of phosphorylation)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:393010 HCAPLUS

DOCUMENT NUMBER: 129:117386

TITLE: Glucuronidation of amines and other xenobiotics catalyzed by expressed human UDP-glucuronosyltransferase 1A3

AUTHOR(S): Green, Mitchell D.; King, Christopher D.; Mojarrabi, Behnaz; Mackenzie, Peter I.; Tephly, Thomas R.

CORPORATE SOURCE: Department of Pharmacology, University of Iowa, Iowa City, IA, 52242, USA

SOURCE: Drug Metabolism and Disposition (1998), 26(6), 507-512

CODEN: DMDSAI; ISSN: 0090-9556

PUBLISHER: Williams & Wilkins

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Glucuronide conjugation of xenobiotics containing a tertiary amine moiety represents a unique and important metabolic pathway for these compds. in humans. Previously, human UDP-glucuronosyltransferase (UGT) 1A4 was shown to be an important enzyme for the formation of quaternary ammonium-linked glucuronides. UGT1A3 is 93% identical to UGT1A4 in primary amino acid sequence. The authors show that human UGT1A3, transiently expressed in human embryonic kidney 293 cells, also catalyzes the N-glucuronidation of primary, secondary, and tertiary amine substrates, such as 4-aminobiphenyl, diphenylamine, and cyproheptadine. In contrast to expressed human UGT1A4, which catalyzes the glucuronidation of amines with high efficiency, glucuronidation of amines catalyzed by UGT1A3 exhibited low efficiency, suggesting that UGT1A3 makes only a limited contribution to the metabolic elimination of these compds. The reactivity of expressed human UGT1A3 toward hydroxylated and carboxylic acid-containing compds. was also examined. In addition to amines, expressed human UGT1A3 catalyzed the glucuronidation of opioids (e.g. morphine and buprenorphine), coumarins, flavonoids (eg. naringenin and quercetin), anthraquinones, and small phenolic compds. (e.g. 4-nitrophenol). Drugs containing a carboxylic acid moiety, such as nonsteroidal anti-inflammatory agents (e.g. naproxen and ibuprofen) and fibrates (eg. ciprofibrate), were substrates for human UGT1A3. In contrast, compds. containing an aliphatic hydroxyl group, such as sapogenins, monoterpenoid alcs. (e.g. menthol and borneol), and androgens, were not conjugated by expressed human UGT1A3. Of the compds. tested, scopoletin, naringenin, and norbuprenorphine appeared to be the best xenobiotic substrates for human UGT1A3.

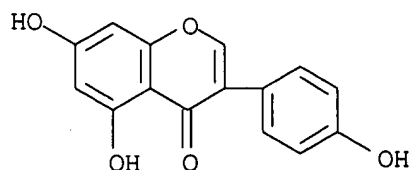
IT 446-72-0, Genistein 16590-41-3, Naltrexone

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(glucuronidation of amines and other xenobiotics catalyzed by expressed human UDP-glucuronosyltransferase 1A3)

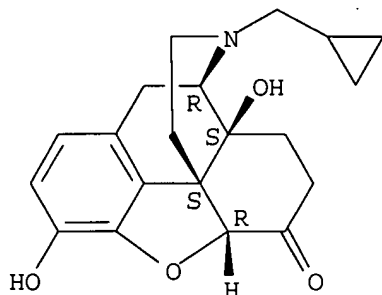
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 16590-41-3 HCAPLUS
 CN Morphinan-6-one, 17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxy-,
 (5 α)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1997:689569 HCAPLUS

DOCUMENT NUMBER: 127:351174

TITLE: Process for the isolation and purification of isoflavones

INVENTOR(S): Zheng, Bolin; Yegge, John A.; Bailey, David T.; Sullivan, James L.

PATENT ASSIGNEE(S): Hauser, Inc., USA

SOURCE: U.S., 14 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5679806	A	19971021	US 1995-394407	19950224 <--
PRIORITY APPLN. INFO.:			US 1995-394407	19950224

AB The present invention relates to a process for the isolation and purification of isoflavones from a number of different biomass sources. More particularly, the present invention relates to a three-step process whereby a biomass containing isoflavones with a solvent thereby forming an extract that is subsequently fractionated using a reverse phase matrix in combination with a step gradient elution, wherein the resulting fractions eluted from the column contain specific isoflavones that are later crystallized. The purified isoflavone glycosides may then be hydrolyzed to their resp. aglycon. E.g., genistin was isolated from soy molasses and hydrolyzed to give genistein.

IT 529-59-9P, Genistin 552-66-9P, Daidzin

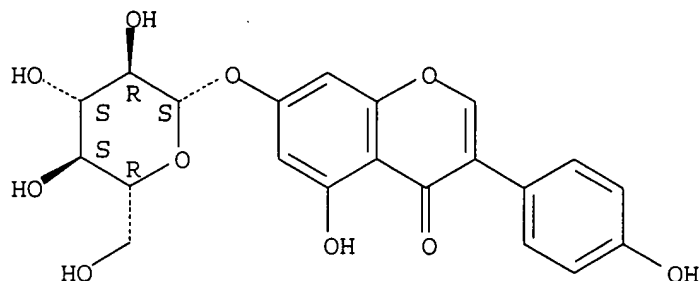
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

(isolation and purification of isoflavones)

RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

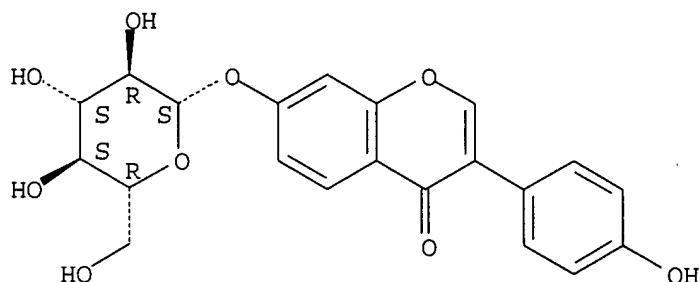
Absolute stereochemistry.



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



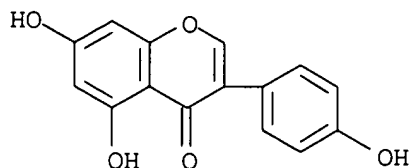
IT 446-72-0P, Genistein 486-66-8P, Daidzein

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses)

(isolation and purification of isoflavones)

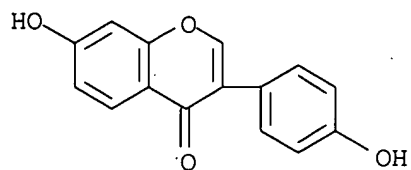
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



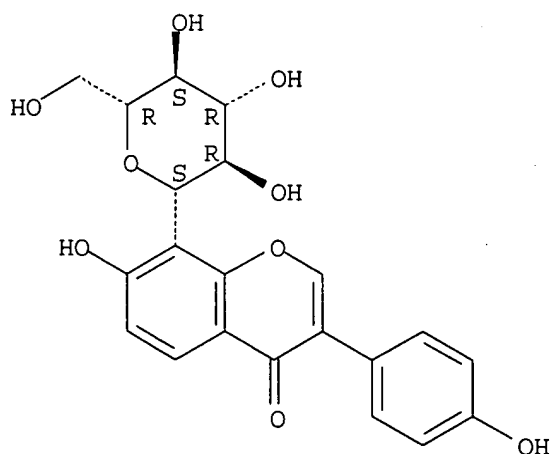
IT 3681-99-0P, Puerarin 40957-83-3P, Glycitein
71385-83-6P 73566-30-0P 163310-42-7P
163310-43-8P

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); USES (Uses) (isolation and purification of isoflavones)

RN 3681-99-0 HCAPLUS

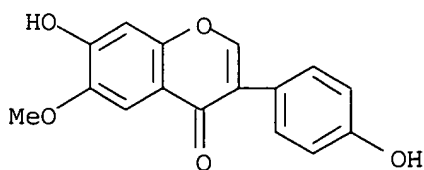
CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 40957-83-3 HCAPLUS

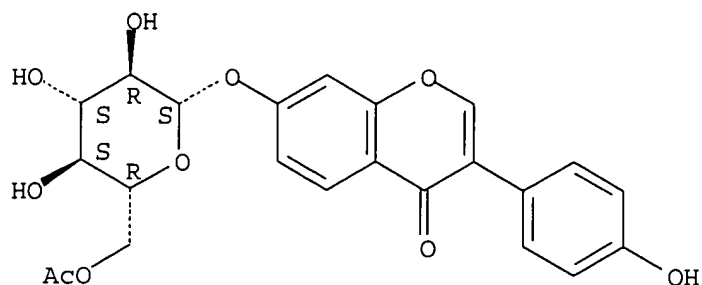
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)-6-methoxy- (9CI) (CA INDEX NAME)



RN 71385-83-6 HCAPLUS

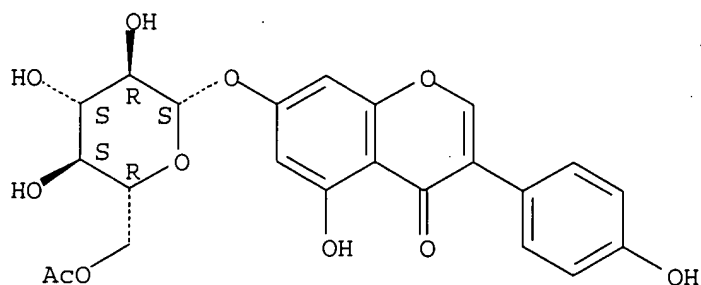
CN 4H-1-Benzopyran-4-one, 7-[(6-O-acetyl- β -D-glucopyranosyl)oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



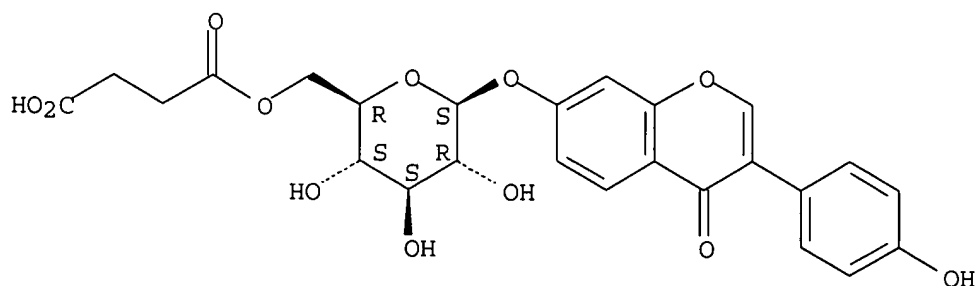
RN 73566-30-0 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[(6-O-acetyl-beta-D-glucopyranosyl)oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



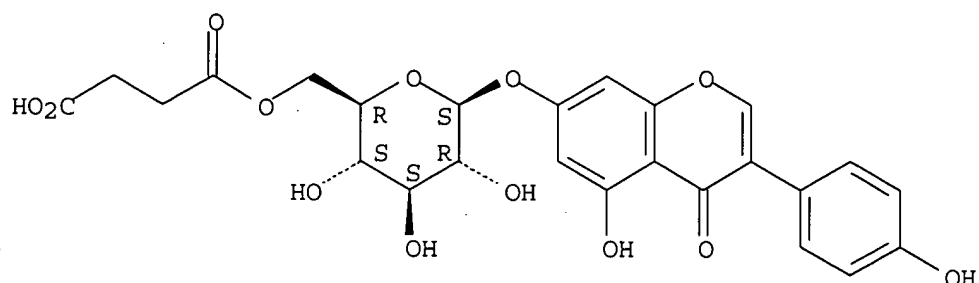
RN 163310-42-7 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[[6-O-(3-carboxy-1-oxopropyl)-beta-D-glucopyranosyl]oxy]-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 163310-43-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-[[[6-O-(3-carboxy-1-oxopropyl)-beta-D-glucopyranosyl]oxy]-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 64-17-5, Ethanol, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (isolation and purification of isoflavones)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

L27 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1997:172486 HCAPLUS
 DOCUMENT NUMBER: 126:166466
 TITLE: Biflavonoids and derivatives thereof as antiviral agents, isolation thereof, and derivative preparation
 INVENTOR(S): Lin, Yuh-Meei; Flavin, Michael T.; Schure, Ralph; Zembower, David E.; Zhao, Geng-Xian
 PATENT ASSIGNEE(S): Medichem Research, Inc., USA
 SOURCE: PCT Int. Appl., 93 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700679	A1	19970109	WO 1996-US10718	19960621 <--
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
CA 2225341	AA	19970109	CA 1996-2225341	19960621 <--
AU 9662880	A1	19970122	AU 1996-62880	19960621 <--
AU 707798	B2	19990722		
EP 833631	A1	19980408	EP 1996-921740	19960621 <--
EP 833631	B1	20021113		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 11508264	T2	19990721	JP 1996-503972	19960621
EP 1245230	A2	20021002	EP 2002-10287	19960621
EP 1245230	A3	20031126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

AT 227569	E	20021115	AT 1996-921740	19960621
US 5948918	A	19990907	US 1998-59913	19980414
PRIORITY APPLN. INFO.:			US 1995-465P	P 19950623
			EP 1996-921740	A3 19960621
			US 1996-668284	A3 19960621
			WO 1996-US10718	W 19960621

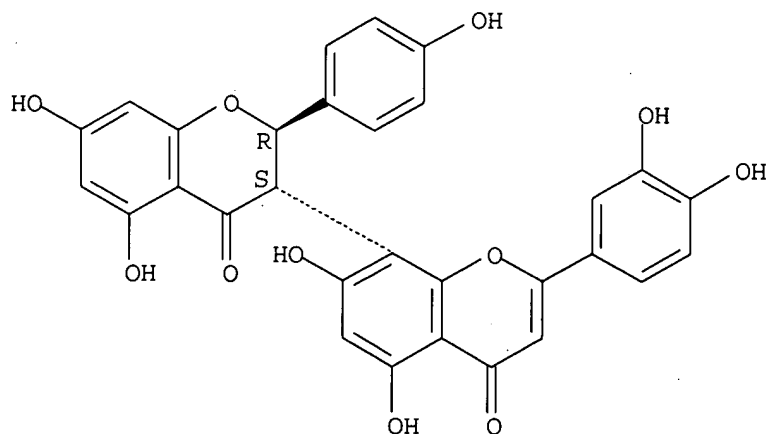
AB Substantially purified antiviral biflavanoids robustaflavone, hinokiflavone, amentoflavone, agathisflavone, volkensiflavone, morelloflavone, rhusflavanone, succedaneaflavanone, GB-1a, and GB-2a are provided. Antiviral biflavanoid derivs. and salt forms thereof, e.g., robustaflavone tetrasulfate potassium salt, and methods for preparing the same are also disclosed. Pharmaceutical compns. which include the antiviral biflavanoids, derivs. or salts thereof are also provided. Also disclosed is an improved method for obtaining substantially pure robustaflavone from plant material. The biflavanoid compds., derivs. or salts thereof of the invention may be used in a method for treating and/or preventing viral infections caused by viral agents such as influenza, e.g., influenza A and B; hepatitis, e.g., hepatitis B; human immunodeficiency virus, e.g., HIV-1; Herpes viruses (HSV-1 and HSV-2); Varicella Zoster virus (VZV); and measles.

IT 16851-21-1P, Morelloflavone 18412-96-9P, GB-2a 19360-72-6P, GB-1a 27542-37-6P, Volkensiflavone
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (biflavanoids and derivs. thereof as antiviral agents, isolation thereof, and derivative preparation)

RN 16851-21-1 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2'-(3,4-dihydroxyphenyl)-2,3-dihydro-5,5',7,7'-tetrahydroxy-2-(4-hydroxyphenyl)-, (2R,3S)- (9CI) (CA INDEX NAME)

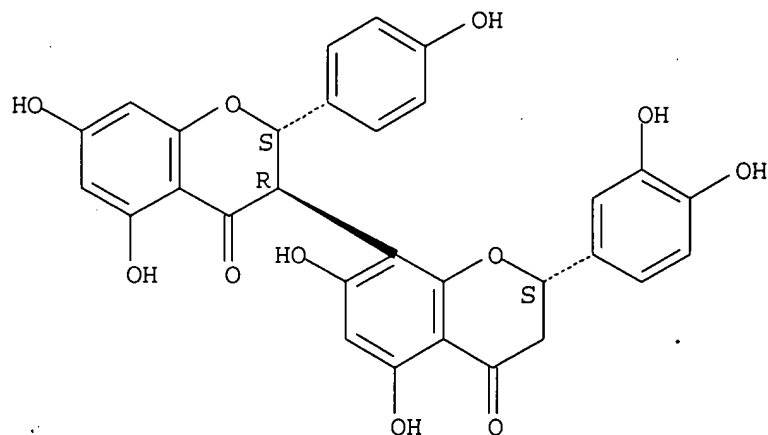
Absolute stereochemistry.



RN 18412-96-9 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2'-(3,4-dihydroxyphenyl)-2,2',3,3'-tetrahydro-5,5',7,7'-tetrahydroxy-2-(4-hydroxyphenyl)-, (2S,2'S,3R)- (9CI) (CA INDEX NAME)

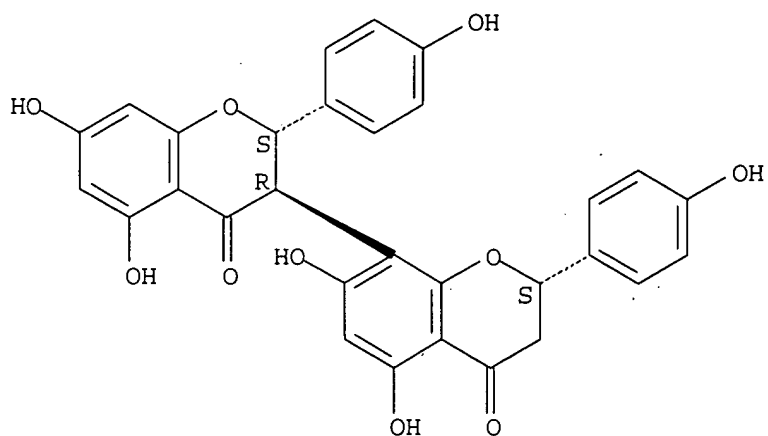
Absolute stereochemistry. Rotation (-).



RN 19360-72-6 HCAPLUS

CN. [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2,2',3,3'-tetrahydro-5,5',7,7'-tetrahydroxy-2,2'-bis(4-hydroxyphenyl)-, (2S,2'S,3R)- (9CI) (CA INDEX NAME)

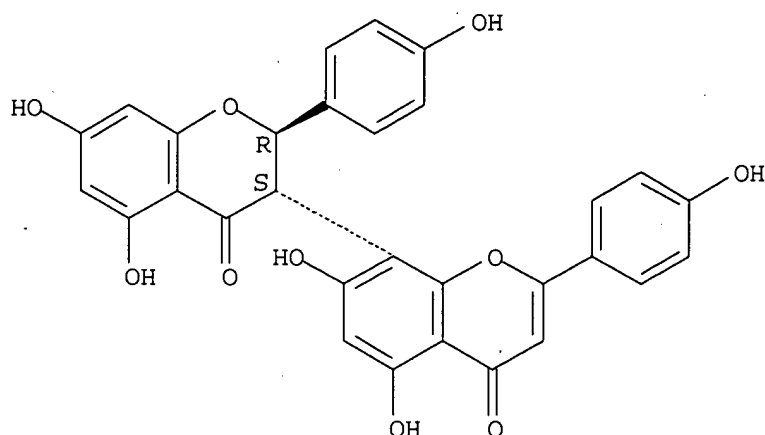
Absolute stereochemistry.



RN 27542-37-6 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2,3-dihydro-5,5',7,7'-tetrahydroxy-2,2'-bis(4-hydroxyphenyl)-, (2R,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 56663-56-0

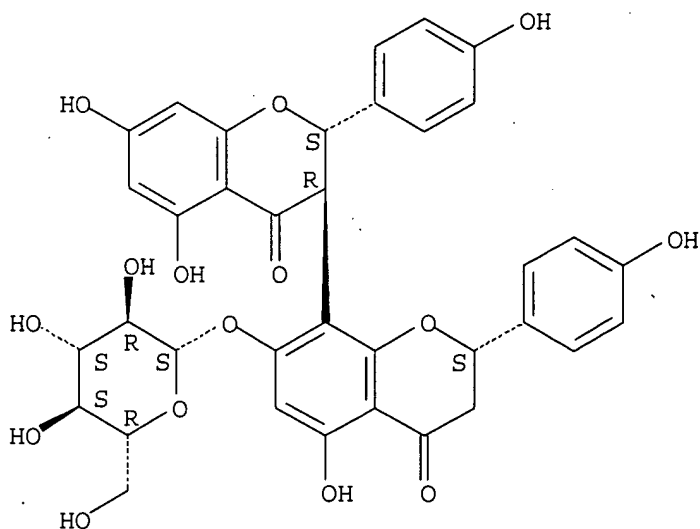
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(biflavonoids and derivs. thereof as antiviral agents, isolation thereof, and derivative preparation)

RN 56663-56-0 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 7'-(β -D-glucopyranosyloxy)-2,2',3,3'-tetrahydro-5,5',7-trihydroxy-2,2'-bis(4-hydroxyphenyl)-, (2S,2'S,3R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 16851-21-1D, Morelloflavone, derivs. 18412-96-9D, GB-2a, derivs. 19360-72-6D, GB-1a, derivs. 27542-37-6D, Volkensiflavone, derivs.

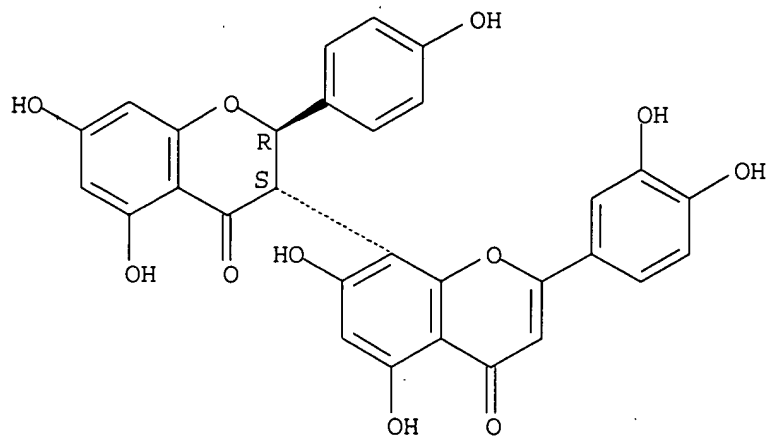
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(biflavonoids and derivs. thereof as antiviral agents, isolation thereof, and derivative preparation)

RN 16851-21-1 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2'-(3,4-dihydroxyphenyl)-2,3-dihydro-

5,5',7,7'-tetrahydroxy-2-(4-hydroxyphenyl)-, (2R,3S)- (9CI) (CA INDEX NAME)

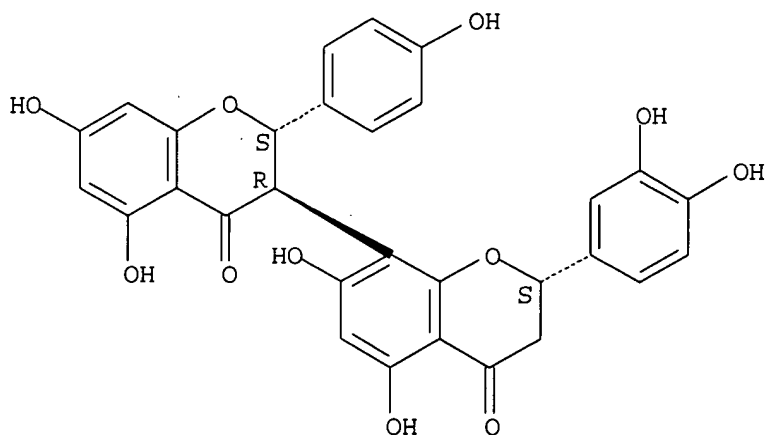
Absolute stereochemistry.



RN 18412-96-9 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2'-(3,4-dihydroxyphenyl)-2,2',3,3'-tetrahydro-5,5',7,7'-tetrahydroxy-2-(4-hydroxyphenyl)-, (2S,2'S,3R)- (9CI) (CA INDEX NAME)

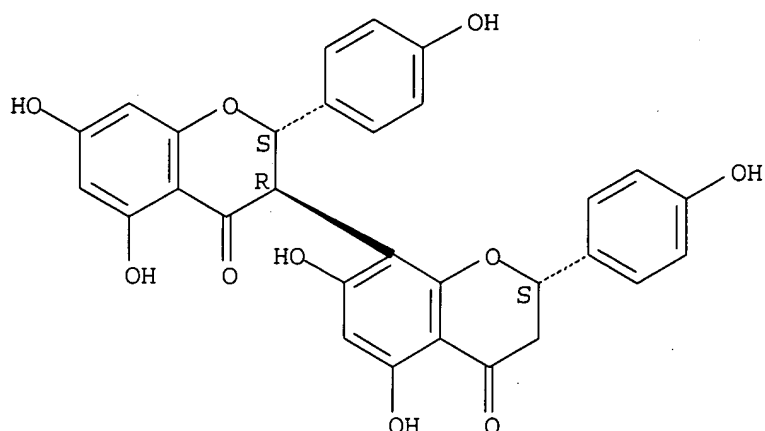
Absolute stereochemistry. Rotation (-).



RN 19360-72-6 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2,2',3,3'-tetrahydro-5,5',7,7'-tetrahydroxy-2,2'-bis(4-hydroxyphenyl)-, (2S,2'S,3R)- (9CI) (CA INDEX NAME)

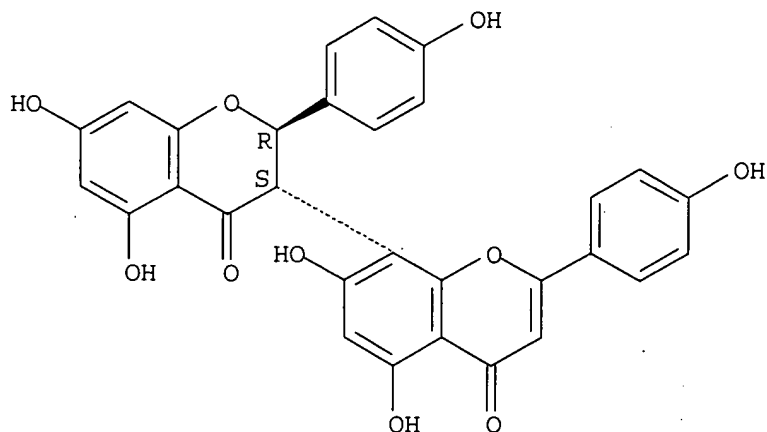
Absolute stereochemistry.



RN 27542-37-6 HCAPLUS

CN [3,8'-Bi-4H-1-benzopyran]-4,4'-dione, 2,3-dihydro-5,5',7,7'-tetrahydroxy-2,2'-bis(4-hydroxyphenyl)-, (2R,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 64-17-5, Ethanol, uses

RL: NUU (Other use, unclassified); USES (Uses)

(solvent extraction mixture containing; biflavanoids and derivs. thereof as antiviral agents, isolation thereof, and derivative preparation)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

L27 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:650879 HCAPLUS

DOCUMENT NUMBER: 125:295093

TITLE: Daidzin decreases ethanol consumption in rats

AUTHOR(S): Heyman, Gene M.; Keung, Wing-Ming; Vallee, Bert L.

CORPORATE SOURCE: Department Psychology, Harvard University, Cambridge,

SOURCE: MA, 02138, USA
 Alcoholism: Clinical and Experimental Research (1996), 20(6), 1083-1087
 CODEN: ACRSDM; ISSN: 0145-6008
 PUBLISHER: Williams & Wilkins
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB In a previous study, daidzin, a constituent of an ancient Chinese herbal treatment for alcoholism, decreased home-cage ethanol consumption in laboratory Syrian golden hamsters. The present study tested the generality of daidzin's antidipsotropic effects. Rats served as subjects in a two-lever choice procedure. At one lever, responses earned 10% ethanol, flavored with saccharin. At the other lever, responses earned an isocaloric starch solution. Daidzin decreased both ethanol and starch consumption, but the decreases in ethanol intake were larger. Changes in consumption were dose dependent, and differences in ethanol and food consumption increased slightly (but significantly) as dose increased. Daidzin produced a similar pattern of decreases in lever pressing. In baseline, there was an approx. equal distribution of responses between the two levers; at the highest daidzin dose, the relative number of responses at the ethanol lever decreased to 30%. These results replicate and extend earlier findings, and they encourage further research on daidzin's capacity to decrease ethanol consumption.

IT 64-17-5, Ethanol, biological studies

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (daidzin decreases ethanol consumption in rats)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

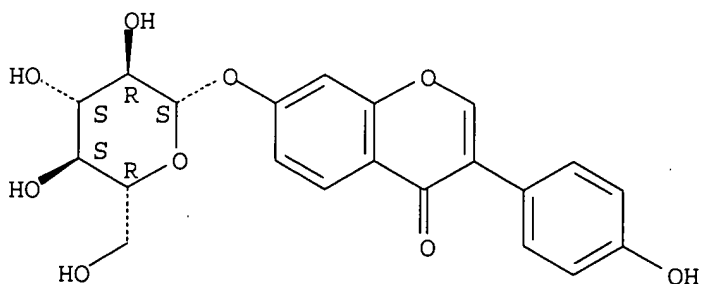
IT 552-66-9, Daidzin

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
 (daidzin decreases ethanol consumption in rats)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L27 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1996:537746 HCAPLUS
 DOCUMENT NUMBER: 125:230777

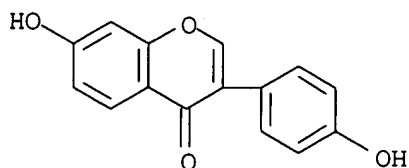
TITLE: Herbal extracts for anti-intoxication compositions
 INVENTOR(S): Duthinh, Phu
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S., 4 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5547671	A	19960820	US 1995-531351	19950920 <--
CA 2229796	AA	19970327	CA 1996-2229796	19960624 <--
WO 9710835	A1	19970327	WO 1996-US10766	19960624 <--
W: AU, CA, CZ, HU, JP, MX, NZ, PL, RU, SI, SK, UA				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9663912	A1	19970409	AU 1996-63912	19960624 <--
AU 709880	B2	19990909		
EP 851761	A1	19980708	EP 1996-923390	19960624
R: AT, BE, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE, PT, FI				
JP 11511471	T2	19991005	JP 1996-512675	19960624
PRIORITY APPLN. INFO.:				
			US 1995-531351	A 19950920
			WO 1996-US10766	W 19960624

AB An anti-intoxication composition for combating side effects of an excessive consumption of alc. may be taken orally as a food supplement before or after drinking. The composition comprises a plurality of herbal or vegetable exts. in defined quantities, at least one of them containing naturally occurring daidzin and daidzein in sufficient quantities to control the gastric and hepatic metabolism of alc. A composition in the form of tablets, capsules, or pouches contains 0.5-2.5 g of extract of kudzu vine blossom (Flos pueraria), 5-25 g of starch derived from the root of kudzu vine (Radix pueraria), 0.5-2.5 g of extract of American ginseng (Panax quinquefolium), 0.5-2.5 g of extract of ginger root (Radix zingiber officinalis), 0.25-1.25 g of extract of tangerine peel, 0.25-1.25 g of extract of green lemon peel, 0.5-2.5 g of extract of magnolia tree bark, and 50 mg of thiamine.

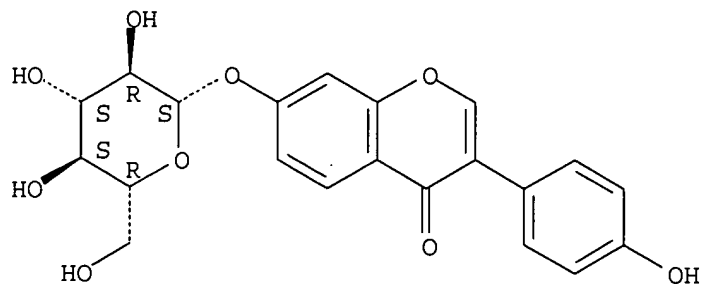
IT **486-66-8P**, Daidzein **552-66-9P**, Daidzin
 RL: FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (herbal exts. for anti-intoxication compns.)

RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L27 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:286932 HCAPLUS

DOCUMENT NUMBER: 125:3434

TITLE: Potentiation of the bioavailability of daidzin by an extract of *Radix puerariae*

AUTHOR(S): Keung, Wing-Ming; Lazo, Oscar; Kunze, Lisa; Vallee, Bert L.

CORPORATE SOURCE: Cent. Biochem. Biophys. Sci. Med., Harvard Med. Sch., Boston, MA, 02115, USA

SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1996), 93(9), 4284-4288

CODEN: PNASA6; ISSN: 0027-8424

PUBLISHER: National Academy of Sciences

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The dose effect of pure daidzin on the suppression of ethanol intake in Syrian gold hamsters was compared with that of crude daidzin contained in a methanol extract of *Radix puerariae* (RP). EC₅₀ values estimated from the graded dose-response curves for pure daidzin and RP extract daidzin are 23 and 2.3 mg per hamster per day, resp. Apparently the antidipsotropic activity of the RP extract cannot be accounted for solely by its daidzin content (22 mg/g). In addition to daidzin, six other isoflavones were identified in the RP extract and quantified - namely, puerparin (160 mg per g of extract), genistin (3.7 mg/g), daidzein (2.6 mg/g), daidzein-4',7'-diglucoside (1.2 mg/g), genistein (0.2 mg/g), and formononetin (0.16 mg/g). None of these, administered either alone or combined, contributes in any significant way to the antidipsotropic activity of the extract. Plasma daidzin concentration-time curves determined in hamsters administered various doses of

pure daidzin or RP extract by i.p. injection indicate that the crude extract daidzin has ≈10 times greater bioavailability than the pure compound. Reconstruction of the dose-response effects for pure and crude daidzin using bioavailable daidzin rather than administered dose gives a single curve. Synthetic daidzin added to the RP extract acquires the bioavailability of the endogenous daidzin that exists naturally in the extract. These results show that (i) daidzin is the major active principle in methanol exts. of RP, and (ii) addnl. constituents in the methanol extract of RP assist uptake of daidzin in golden hamsters.

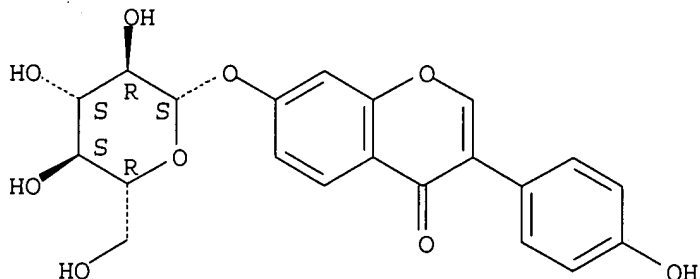
IT 552-66-9, Daidzin

RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (daidzin bioavailability potentiation by extract of *Radix puerariae* in relation to ethanol consumption)

RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

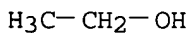


IT 64-17-5, Ethanol, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)
(daidzin bioavailability potentiation by extract of Radix puerariae in
relation to ethanol consumption)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

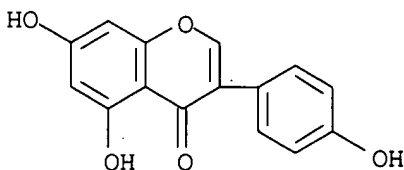


IT 446-72-0, Genistein 486-66-8, Daidzein 529-59-9

, Genistin 3681-99-0, Puerarin

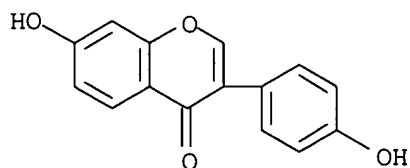
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU
(Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(isoflavones of extract of Radix puerariae in relation to ethanol
consumption)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
NAME)

RN 486-66-8 HCAPLUS

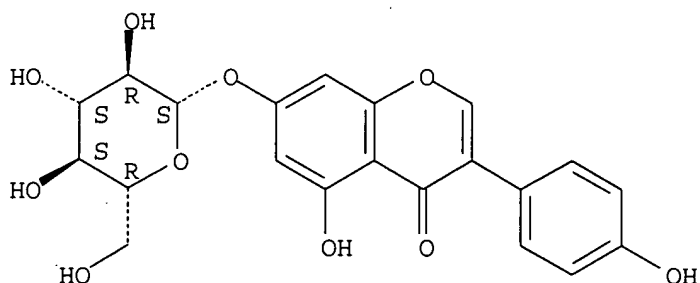
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX
NAME)



RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

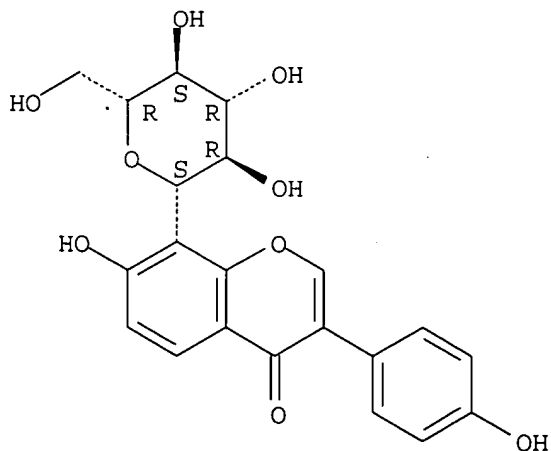
Absolute stereochemistry.



RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8- β -D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:805959 HCAPLUS

DOCUMENT NUMBER: 123:248998

TITLE: Daidzin suppresses ethanol consumption by Syrian golden hamsters without blocking acetaldehyde metabolism

AUTHOR(S): Keung, Wing-Ming; Lazo, Oscar; Kunze, Lisa; Vallee,

Bert L.
 CORPORATE SOURCE: Cent. Biochem. Biophys. Sci. Med., Harvard Med. Sch.,
 Boston, MA, 02115, USA
 SOURCE: Proceedings of the National Academy of Sciences of the
 United States of America (1995), 92(19),
 8990-93
 CODEN: PNASA6; ISSN: 0027-8424
 PUBLISHER: National Academy of Sciences
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Daidzin is a potent, selective, and reversible inhibitor of human
 mitochondrial aldehyde dehydrogenase (ALDH) that suppresses free-choice
 ethanol intake by Syrian golden hamsters. Other ALDH inhibitors, such as
 disulfiram (Antabuse) and calcium citrate carbimide (Temposil), have also
 been shown to suppress ethanol intake of laboratory animals and are thought to
 act by inhibiting the metabolism of acetaldehyde produced from ingested
 ethanol. To determine whether or not daidzin inhibits acetaldehyde metabolism

in

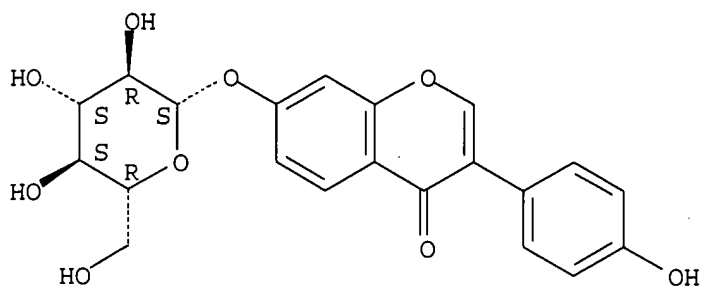
vivo, plasma acetaldehyde in daidzin-treated hamsters was measured after
 the administration of a test dose of ethanol. Daidzin treatment (150
 mg/kg per day i.p. for 6 days) significantly suppresses (>70%) hamster
 ethanol intake but does not affect overall acetaldehyde metabolism. In
 contrast, after administration of the same ethanol dose, plasma
 acetaldehyde concentration in disulfiram-treated hamsters reaches 0.9 mM, 70
 times higher than that of the control. In vitro, daidzin suppresses
 hamster liver mitochondria-catalyzed acetaldehyde oxidation very potently
 with an IC₅₀ value of 0.4 μM, which is substantially lower than the
 daidzin concentration (70 μM) found in the liver mitochondria of
 daidzin-treated hamsters. These results indicate that (i) the action of
 daidzin differs from that proposed for the classic, broad-acting ALDH
 inhibitors (e.g., disulfiram), and (ii) the daidzin-sensitive
 mitochondrial ALDH is not the one and only enzyme that is essential for
 acetaldehyde metabolism in golden hamsters.

IT 64-17-5, Ethanol, biological studies
 RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
 (daidzin suppresses ethanol consumption by Syrian golden hamsters
 without blocking acetaldehyde metabolism)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

IT 552-66-9, Daidzin
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological
 study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
 (Uses)
 (daidzin suppresses ethanol consumption by Syrian golden hamsters
 without blocking acetaldehyde metabolism)
 RN 552-66-9 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L27 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:587392 HCAPLUS

DOCUMENT NUMBER: 121:187392

TITLE: Comparative study with thin-layer chromatography on water and ethanol as extraction solvents for components of Puerariae Radix

AUTHOR(S): Yang, Hong; Yang, Honglin

CORPORATE SOURCE: School of Pharmacy, West China University of Medical Sciences, Chengdu, 610041, Peop. Rep. China

SOURCE: Huaxi Yaoxue Zazhi (1994), 9(1), 35-8

CODEN: HYZAE2; ISSN: 1006-0103

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB Puerariae Radix in the Chinese Pharmacopeia is a traditional medicine used to moderate headache and fever. Its pharmaceutical preps. are usually tablets prepared by ethanol extract, and no reports dealing with water as the extraction solvent have been published. In this paper, water and ethanol were used resp. to extract the components of Puerariae Radix and the exts. were examined by TLC, using the fluorescence spots in the chromatographs as the comparative criteria. In order to obtain a better separation effect of the components, the developer of TLC was investigated and optimized and the mixture of chloroform-methanol-water (14:6:0.5) was found to give five spots in TLC chromatographs, while the developer used in the literature only gave three spots. The results indicated no difference between water and ethanol as the extraction solvents in the number, color tone, intensity and R_f values of the fluorescence spots in the chromatographs. Hence, it may be concluded that water can be used to replace ethanol to extract the components of Puerariae Radix with same extraction technique which would have significant economic value in production on a large scale.

IT 3681-99-0, Puerarin

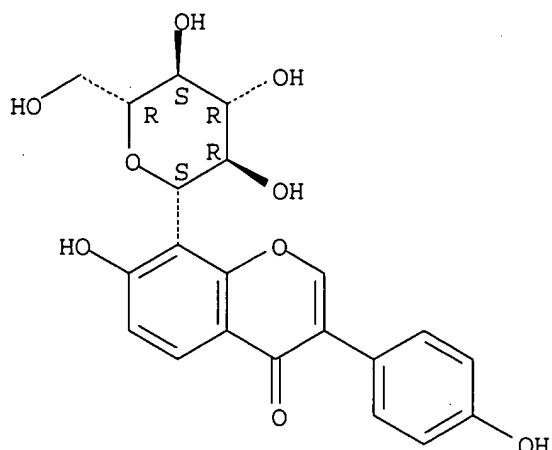
RL: ANT (Analyte); ANST (Analytical study)

(water and ethanol as extraction solvents for TLC of glycosides of Puerariae Radix)

RN 3681-99-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 8-β-D-glucopyranosyl-7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 64-17-5, Ethanol, analysis
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (water and ethanol as extraction solvents for TLC of glycosides of Puerariae
 Radix)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

L27 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:2642 HCAPLUS
 DOCUMENT NUMBER: 120:2642
 TITLE: Daidzin and daidzein suppress free-choice ethanol
 intake by Syrian Golden hamsters
 AUTHOR(S): Keung, Wing Ming; Vallee, Bert L.
 CORPORATE SOURCE: Cent. Biochem. Biophys. Sci. Med., Harvard Med. Sch.,
 Boston, MA, 02115, USA
 SOURCE: Proceedings of the National Academy of Sciences of the
 United States of America (1993), 90(21),
 10008-12
 CODEN: PNASA6; ISSN: 0027-8424
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Syrian Golden hamsters prefer and consume large and remarkably constant
 amts. of ethanol in a simple two-bottle free-choice regimen. Ethanol
 intake is significantly suppressed by zimelidine, bromocryptine,
 buspirone, and lithium carbonate, pharmacol. agents that have been shown
 to be beneficial in controlling ethanol intake in alc.-dependent humans.
 These results suggest that this ethanol-drinking animal model has high
 "predictive validity" and can be used effectively in the search for and
 identification of new agents for the treatment of alc. abuse. The model
 has enabled the authors to confirm the putative antidipsotropic effect of
 Radix puerariae (RP), an herb long used in traditional Chinese medicine
 for the treatment of patients who abuse alc. A crude extract of RP at a dose
 of 1.5 g·kg⁻¹·day⁻¹ significantly suppresses (>50%) the
 free-choice ethanol intake of Golden hamsters. Moreover, two major
 constituents of RP, daidzein (4',7-dihydroxyisoflavone) and daidzin (the

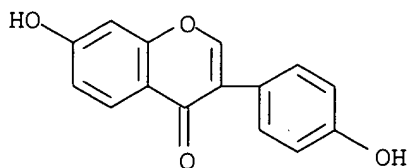
7-glucoside of daidzein), were also shown to suppress free-choice ethanol intake. Daidzin and daidzein, at doses of 150 and 230 mg·kg⁻¹·day⁻¹, resp., suppress ethanol intake by >50%. RP, daidzein, and daidzin treatment do not significantly affect the body weight and water or food intake of the hamsters. These findings identify a class of compds. that offer promise as safe and effective therapeutic agents for alc. abuse.

IT 486-66-8, Daidzein 552-66-9, Daidzin

RL: BIOL (Biological study)
(ethanol intake suppression by)

RN 486-66-8 HCAPLUS

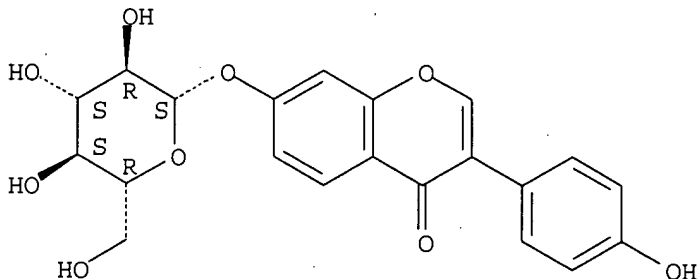
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β-D-glucopyranosyloxy)-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 64-17-5, Ethanol, biological studies

RL: BIOL (Biological study)
(intake, suppression of, by daidzin and daidzein)

RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

L27 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:231797 HCAPLUS

DOCUMENT NUMBER: 116:231797

TITLE: Chemoattraction of zoospores of the soybean pathogen, *Phytophthora sojae*, by isoflavones

AUTHOR(S): Morris, P. F.; Ward, E. W. B.

CORPORATE SOURCE: Agric. Canada Res. Cent., London, ON, N6G 2V4, Can.

SOURCE: Physiological and Molecular Plant Pathology (1992), 40(1), 17-22

CODEN: PMPPEZ; ISSN: 0885-5765

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The main infective agents in plant diseases caused by spp. of the fungal genera *Phytophthora* and *Pythium* are zoospores that are attracted chemotactically to plant surfaces. The simple isoflavones daidzein and genistein, which occur in soybean root exudates, are highly effective chemoattractants for zoospores of *P. sojae*, an economically important pathogen of soybeans. When added to suspensions of actively swimming zoospores, daidzein and genistein also cause rapid encystment and germination. The isoflavones are active at concns. ≥ 10 nM but are inactive with zoospores of several other spp. of *Phytophthora* and *Pythium* nonpathogenic on soybeans. Daidzein and genistein are also inducers of nodulation genes in *Bradyrhizobium japonicum*, the N₂-fixing bacterial symbiont of soybeans. Thus, both the pathogen and the symbiont identify their host by recognizing the same chemical signals.

IT 64-17-5, Ethanol, biological studies 446-72-0, Genistein

486-63-5, Isoformononetin 486-66-8, Daidzein

529-59-9, Genistin 552-66-9, Daidzin

RL: BIOL (Biological study)

(as chemoattractant for zoospores of fungi)

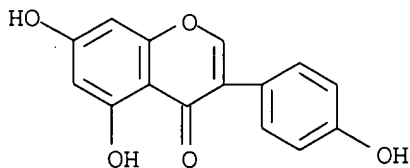
RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

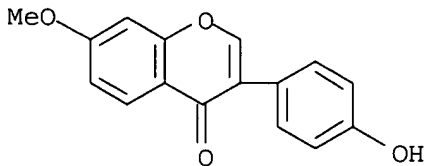
RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



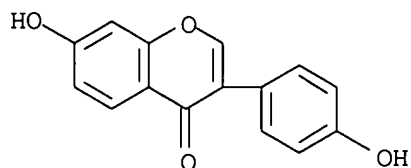
RN 486-63-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 3-(4-hydroxyphenyl)-7-methoxy- (9CI) (CA INDEX NAME)



RN 486-66-8 HCAPLUS

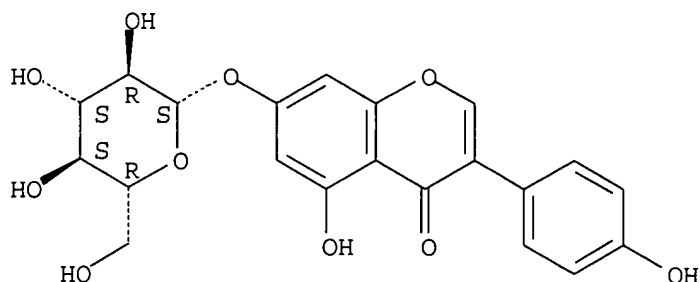
CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



RN 529-59-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-5-hydroxy-3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)

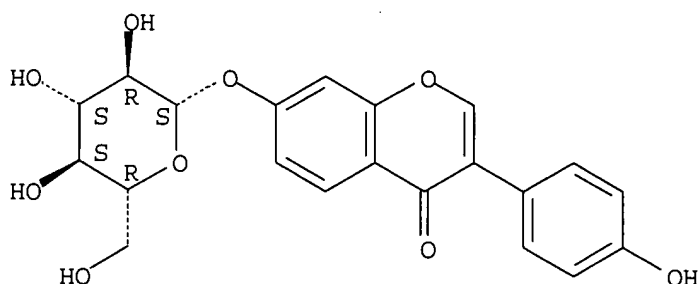
Absolute stereochemistry.



RN 552-66-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 7-(β -D-glucopyranosyloxy)-3-(4-hydroxyphenyl) - (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L27 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:509686 HCAPLUS

DOCUMENT NUMBER: 115:109686

TITLE: Separation and identification of phytoalexins from leaves of groundnut (*Arachis hypogaea*) and development of a method for their determination by reversed-phase high-performance liquid chromatography

AUTHOR(S): Edwards, Christine; Strange, Richard N.

CORPORATE SOURCE: Dep. Biol., Univ. Coll. London, London, WC1E 6BT, UK

SOURCE: Journal of Chromatography (1991), 547(1-2), 185-93

CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal
 LANGUAGE: English

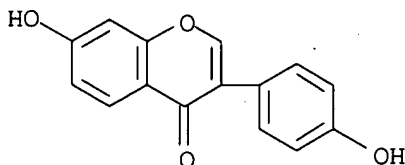
AB Leaves of *A. hypogaea*, infected with the early leaf spot fungus, *Cercospora arachidicola*, were extracted in aqueous EtOH extract on silica gel yielded

fractions with 1-5 compds. from which the phytoalexins could be isolated by semipreparative reversed-phase HPLC. The major phytoalexins were demethylmedicarpin, formononetin, 7,4'-dimethoxy-2'-hydroxyisoflavone, and medicarpin. Minor components were 7,2'-dihydroxy-4'-methoxyisoflavanone and daidzein. Compds. were identified by cochromatog. and comparison of their UV and mass spectra with authentic samples using an HPLC system equipped with a diode-array detector, HPLC, mass spectrometry, and gas chromatog.-mass spectrometry of their trimethylsilyl derivs. A solid-phase extraction method was developed for processing large nos. of samples. MeCN eluates from C18 cartridges were separated by reversed-phase HPLC and the phytoalexins quantified by reference to external stds. of the authentic compds.

IT 64-17-5, Ethanol, uses and miscellaneous
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (extraction by, of phytoalexins from groundnut)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

IT 486-66-8, Daidzein
 RL: ANT (Analyte); ANST (Analytical study)
 (separation and determination of, of groundnut, by extraction HPLC)
 RN 486-66-8 HCAPLUS
 CN 4H-1-Benzopyran-4-one, 7-hydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



L27 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1987:533745 HCAPLUS

DOCUMENT NUMBER: 107:133745

TITLE: Fast atom bombardment of organic substrates at controlled low temperatures

AUTHOR(S): Heckles, Keith; Johnstone, Robert A. W.; Wilby, Anna H.

CORPORATE SOURCE: Dep. Org. Chem., Univ. Liverpool, Liverpool, L69 3BX, UK

SOURCE: Tetrahedron Letters (1987), 28(1), 103-6
 CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new fast atom bombardment probe, in which the temperature of the sample area at the tip can be controlled to $\pm 1^\circ$ between about $+35^\circ$ to

-130°, has been used to exam. normally volatile solvents and substrates and to investigate equilibrium in solution

IT 64-17-5, Ethanol, properties 446-72-0, Genistein

RL: PRP (Properties)

(fast atom bombardment and spectrum of)

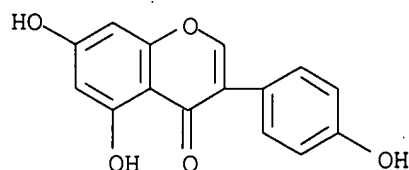
RN 64-17-5 HCAPLUS

CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)



L27 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1981:456059 HCAPLUS

DOCUMENT NUMBER: 95:56059

TITLE: Effect of ethanol feeding upon levels of a male-specific hepatic estrogen-binding protein: a possible mechanism for feminization

AUTHOR(S): Eagon, Patricia K.; Porter, Lynne E.; Gavalier, Judith S.; Egler, Kimberly M.; Van Thiel, David H.

CORPORATE SOURCE: Sch. Med., Univ. Pittsburgh, Pittsburgh, PA, 15261, USA

SOURCE: Alcoholism: Clinical and Experimental Research (1981), 5(2), 183-7

CODEN: ACRSDM; ISSN: 0145-6008

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Male, but not female, rat liver cytosol contains an estrogen-binding protein with unique properties: rapid binding of estradiol [50-28-2], high binding capacity, moderate affinity for estradiol, and specificity for steroidal estrogens and weak androgens, but not for nonsteroidal estrogens or other steroids. The estradiol-binding activity of this protein is reduced in cytosol from livers of EtOH [64-17-5]-fed rats as compared to that from their isocalorically fed controls. The properties of this male-specific hepatic estrogen-binding protein suggest a role for this protein in the regulation of estrogen levels in the male animal. Moreover, the reduction in activity of this unique protein in the liver of alc.-fed animals may explain, at least in part, the feminization commonly seen in chronic alc. men.

IT 446-72-0

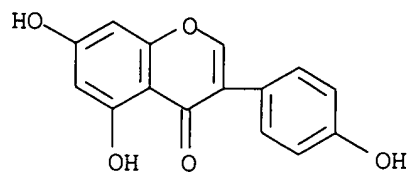
RL: BIOL (Biological study)

(binding of, to male liver proteins, ethanol effect on, feminization in relation to)

RN 446-72-0 HCAPLUS

CN 4H-1-Benzopyran-4-one, 5,7-dihydroxy-3-(4-hydroxyphenyl)- (9CI) (CA INDEX NAME)

NAME)



IT 64-17-5, biological studies
 RL: BIOL (Biological study)
 (male-specific hepatic estrogen-binding protein response to,
 feminization in relation to)
 RN 64-17-5 HCAPLUS
 CN Ethanol (9CI) (CA INDEX NAME)

H₃C-CH₂-OH

=> set cost on
SET COMMAND COMPLETED

=> d his

(FILE 'HOME' ENTERED AT 14:52:30 ON 25 JUL 2005)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 14:52:42 ON 25 JUL 2005

L1 STR
L2 50 S L1
L3 1168 S L1 FULL
E ALDH-2/CN
L4 48 S ALDH2 OR ALDH(L) 2

FILE 'HCAPLUS' ENTERED AT 14:58:59 ON 25 JUL 2005

L5 3 S US6121010/PN OR US98-85418#/AP,PRN

FILE 'REGISTRY' ENTERED AT 15:00:16 ON 25 JUL 2005

E ALCOHOL DEHYDROGENASE
E ALCOHOL DEHYDROGENASE/CN
E ALCOHOL DEHYDROGENASE 2/CN
L6 27 S ALCOHOL DEHYDROGENASE 2?/CN

FILE 'HCAPLUS' ENTERED AT 15:02:19 ON 25 JUL 2005

FILE 'HCAPLUS' ENTERED AT 15:02:54 ON 25 JUL 2005

L7 TRA L5 1- RN : 33 TERMS

FILE 'REGISTRY' ENTERED AT 15:02:54 ON 25 JUL 2005

L8 33 SEA L7
L9 25 S L8 AND 46.150.18/RID
E 5-HYDROXYINDOLE-3-ACETIC ACID/CN
L10 3 S E3-E6
E 3,4-DIHYDROXYPHENYLACETIC ACID/CN
L11 10 S E4-E13
E 5-HYDROXYINDOLE-3-ACETALDEHYDE/CN
L12 1 S E3
E 3,4-DIHYDROXYPHENYL-ACETALDEHYDE/CN
E 3,4-DIHYDROXYPHENYL ACETALDEHYDE/CN
L13 16 S DIHYDROXYPHENYL (L) ACETALDEHYDE
L14 1 S HYDROXYINDOLE (L) ACETALDEHYDE

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L15 6832 S L3
L16 684 S L6 OR L4 OR ALDH2 OR ALDH (W) 2 OR ALCOHOL (W) DEHYDROGENASE (
L17 8 S L15 AND L16

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FILE 'HCAPLUS' ENTERED AT 15:16:05 ON 25 JUL 2005

L18 9710 S L10 OR L11 OR L12 OR L13 OR L14 OR (HYDROXYINDOL? OR DIHYDROX
L19 8 S L15 AND L18
L20 4 S L19 NOT L17
L21 33 S L15 (L) (ALCOHOL?)
L22 29 S L21 NOT (L17 OR L20)
E ALCOHOLISM/CT